Order No. MD9912149C2

Service Manual

Portable Stereo CD System

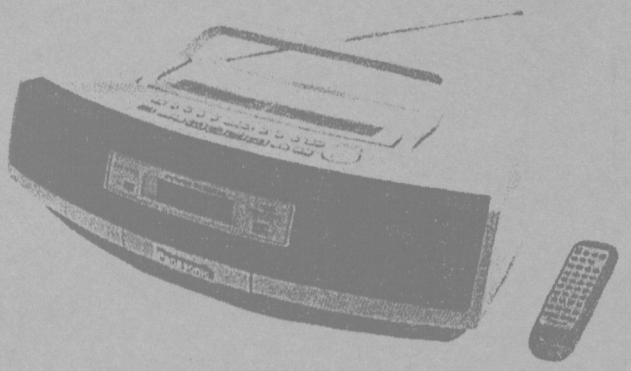
COMPACT disc DIGITAL AUDIO

MASH multi-stage noise shaping

RX-ED50

Colour

(S) ..... Silver Type



E .... Europe
EB .... Great Britain
EG .... Germany and Italy

Tape Deck: AR2 Mechanism Series
Traverse Deck: CU100 Mechanism Series

■ RADIO

Frequency Range	
AM	522-1629 kHz (9 kHz steps)
FM	87.5-108 MHz (50 kHz steps)
Intermediate Frequency	
AM	459 kHz
FM	10.7 MHz
Sensitivity	
AM	42.5 dB/m/50 mW
FM	17 dB/50 mW

■ TAPE RECORDER

Track System	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	AC erase
Monitor system	Variable sound monitor
Frequency range	
Normal position	30 Hz-16 kHz
High position	30 Hz-17 kHz

■ CD PLAYER

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser (wavelength 780 nm)
No. of channels	2 channel, stereo
Wow and flutter	Below measurable limit
D/A converter	MASH (1 bit DAC)

■ GENERAL

Power requirement	
AC	230-240 V, 50 Hz
Power consumption	30 W
Battery	12 V (8 R20 D size, UM-1 batteries)
Memory backup for computer/clock	6 V (4 R6 (AA, UM-3) batteries)
Speakers	
Full Range	8 cm 6.0Ω x 2
Jacks	
Output	
Phones	3.5 mm stereo (16-64Ω)
Input	
AUX IN	3.5 mm stereo
Dimensions (W x H x D)	490 x 142 x 291 mm
Weight	About 5 kg without batteries

Panasonic®

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Notes:

1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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1 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C616 through a 10 Ω, 5 W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screw driver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 230 V, 240 V, 50 Hz in NO SIGNAL mode should be ~80 mA, ~100 mA respectively.

2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

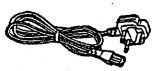
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

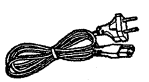
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

3 Accessories

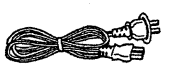
Remote Control Transmitter.....1 pc



AC Power Supply (United Kingdom).....1 pc



AC Power Supply (E/EG).....1 pc



AC Power Supply (Australia & New Zealand).....1 pc

4 Precaution of Laser Diode

Caution:

This product utilizers a class 1 laser. Invisible laser radiation is emitted from the optical pick up lens.

When the unit is turned on:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

CAUTION:

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

ACHTUNG:

Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge: 780 nm

Maximale strahlungsleistung der lasereinheit: 100 µW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werkseitig justierten einstellregler der lasereinhit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

5 Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- **Handling of traverse deck (optical pickup)**
  1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
  2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).
  3. Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible.
  4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

- **Grounding for electrostatic breakdown prevention**
  1. Human body grounding

     Use the anti-static wrist strap to discharge the static electricity from your body.
  2. Work table grounding.

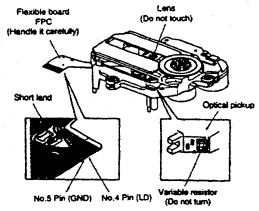
     Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

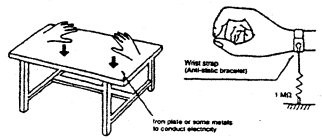
Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when replacing the Traverse Deck

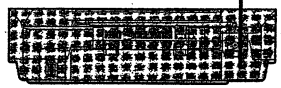
The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.





6 Use of Caution Labels

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



(Back of product)
(Panel trasero del producto)
(Produktens baksida)

DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.	(Indersiden at apparatet)
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotteen sisällä)
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING HÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.	(Produktets innside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)

7 Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ⓐ or the BSI mark ⓚ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

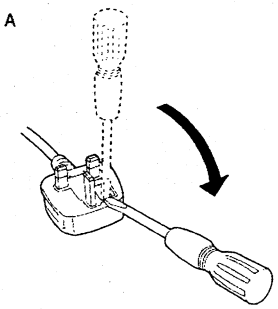
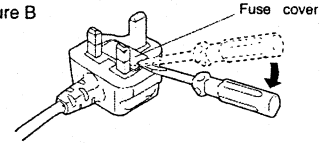


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

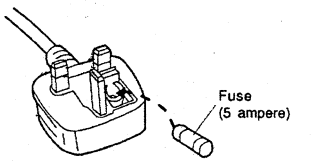
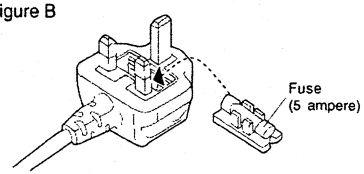
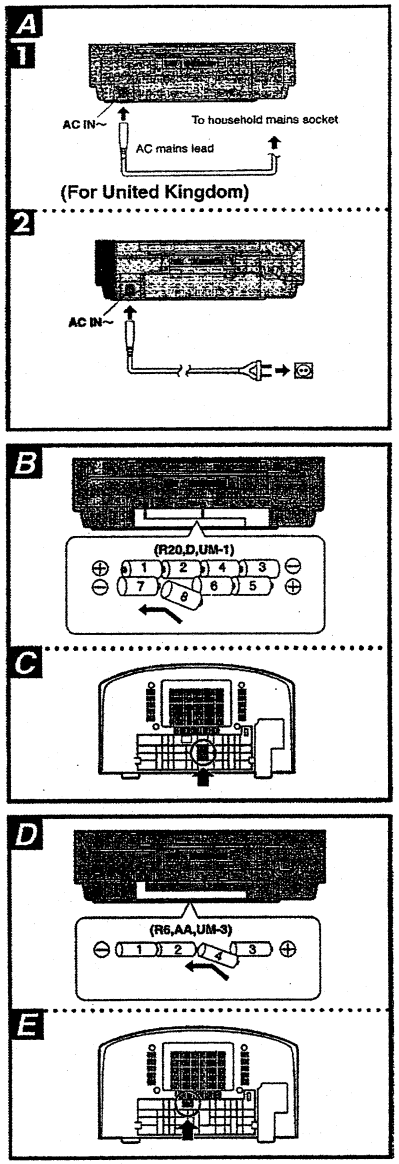


Figure B



8 Power Supply



Operating the unit on AC power A

For United Kingdom Only
Be sure to read the Caution for AC Mains Lead on Page 5 before connection.

1 Connect the AC Mains Lead.
The AC Mains Lead must be disconnected from the unit if you intend to power the unit with batteries.

2 Connect the AC power cord.
The AC power cord must be disconnected from the unit if you intend to power the unit with batteries.

Using batteries (not included) B

The unit cannot be powered by batteries if the AC power cord is connected.
The remote control cannot turn the unit on when batteries are used.

Removing the batteries C

Open the battery cover, insert a finger into the hole in the bottom of the unit and push out.

Battery life

"▯" lights when the batteries are running down. Replace all the batteries with new ones.

Memory back-up batteries (not included) D

Insert these batteries to save the information contained in the memory, such as the clock and timer settings, if there is an interruption to the power supply.
These batteries do not power the unit.

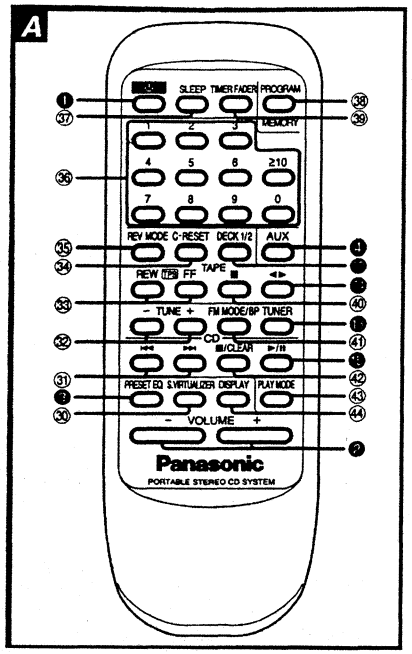
Replacing the batteries

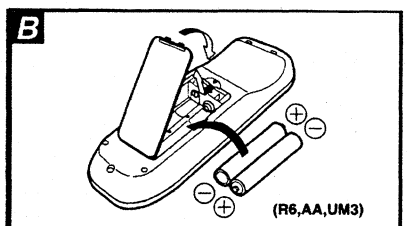
- The memory batteries last about one year.
- Connect the unit to AC power before replacing the batteries.
- Extent the life of the memory batteries by always pressing [⏻/I] to turn the unit off before disconnecting the unit from the AC power source or replacing the power batteries.

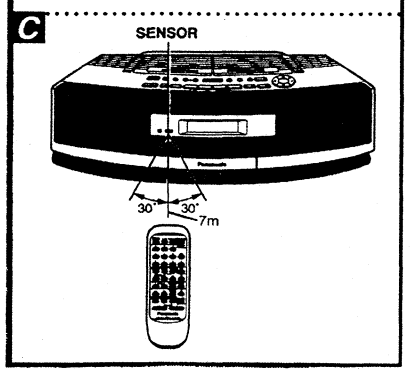
Removing the batteries E

Open the battery cover, insert a finger into the hole in the bottom of the unit and push out.

9 The Remote Control







Buttons A

Number	Designation
(30)	Sound virtualizer button (S.VIRTUALIZER)
(31)	CD skip/search buttons (⏮, ⏭)
(32)	Tuning buttons (-TUNE+)
(33)	Rewind/fast forward TPS buttons (REW TPS FF)
(34)	Tape counter reset button (C-RESET)
(35)	Reverse mode select button (REV MODE)
(36)	Numbered buttons
(37)	Sleep timer button (SLEEP)
(38)	Program memory button (PROGRAM MEMORY)
(39)	Timer fader button (TIMER FADER)
(40)	Tape stop/mode select button (■)
(41)	FM mode BP button (FM MODE/BP)
(42)	CD stop/program clear/mode select button (■/CLEAR)
(43)	CD play mode button (PLAY MODE)
(44)	Display select button (DISPLAY)

When the unit is supplied with AC power, buttons ❶ to ❹, ⓭, ⓯, ㉒ and ㉔ function in the same way as the controls on the main unit. To save power, the unit cannot be turned on from the remote control when the batteries are used.

Batteries B

Insert so the poles (+ and -) match those in the remote control.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.
Replace if the unit does not respond to the remote control even when held close to the front panel.

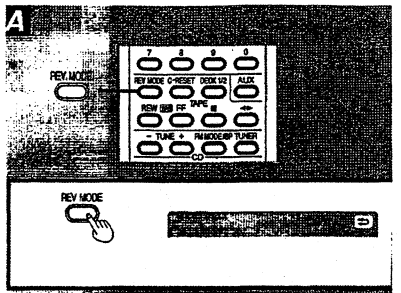
Use C

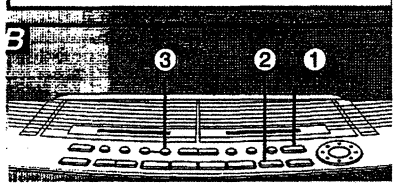
Aim at the sensor, avoiding obstacles, at a maximum range of 7 meters directly in front of the unit.

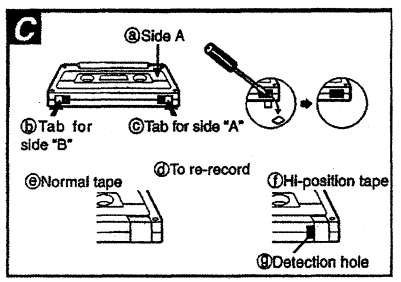
- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

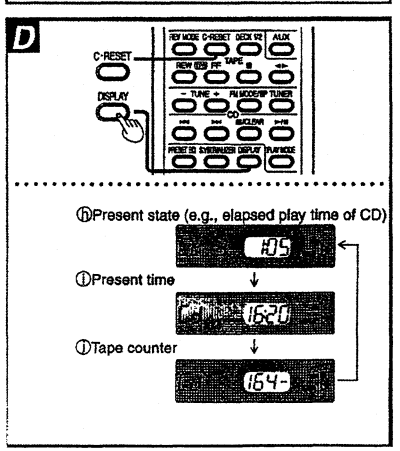
Do not:
- put heavy objects on the remote control.
- take the remote control apart.
- spill liquids onto the remote control.

10 Before Recording









Use household AC power or new batteries when recording to avoid poor recordings caused by the batteries running down.
Televisions can cause interference to recordings made on this unit if the two are too close to each other.

Selection of tapes for recording
The unit automatically identifies the type of tape.

Normal Position/TYPE I	O.K.
High position/TYPE II	O.K.
Metal position/TYPE IV	NO

Metal position tapes can be used, but the unit will not be able to record or erase them correctly.

Volume and sound quality in recording
- **Recording level is set automatically.**
- **Recordings are unaffected by changes to sound quality.**

Selecting reverse mode A

Remote Control Only

Press [REV MODE].
⇄) and (⇄): Both sides record (top side ⟶ bottom side).
⇄: One side only records.

Erasing recordings B

① **Insert the cassette with the side to be erased facing up.**
② **Press [■ TAPE/CD] to switch to TAPE mode.**
③ **Press [● / II].**

Erasure Prevention C

The illustration shows how to remove the tabs to prevent recording. To record on the tape again, cover as shown, being careful not to cover the high position discrimination hole.

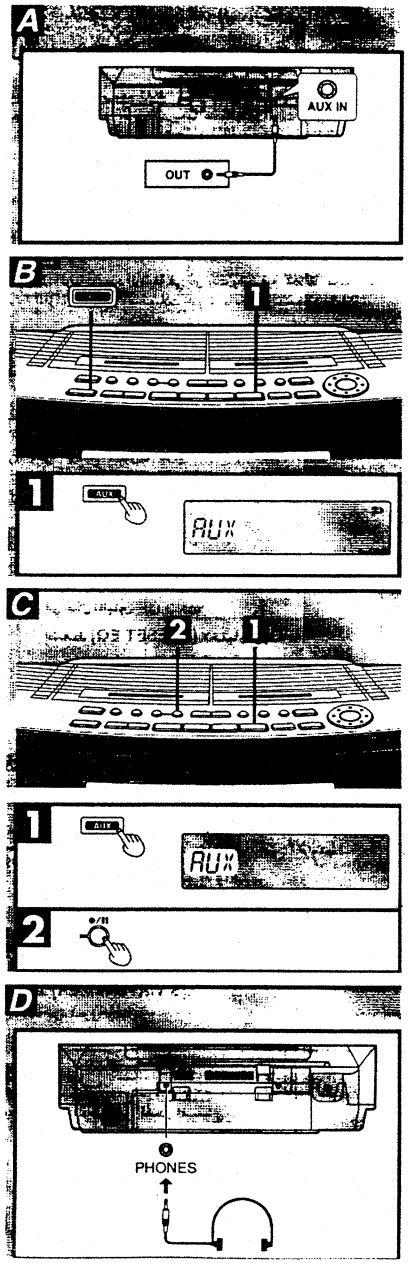
To Display the Tape Counter while Recording D

Remote Control Only

Press [DISPLAY].
Each time the button is pressed in CD, Radio, or AUX mode

To reset the tape counter
Press [C-RESET].
The counter resets to "000"

11 Using Auxiliary Equipment



Using Auxiliary Equipment A

You can play or record sound from other equipment through this unit's AUX IN terminal.
Plug type: 3.5mm stereo

Playback B

Preparation: (when using batteries) Press [⏻/I].

1 Press [**AUX**] to switch to AUX mode.
2 Start playback on the equipment.

Recording C

1 Do steps **1** and **2** as described above.
2 Press [●/II].

Note:
When this unit and the other equipment are connected to each other, do not set input on both unit's to "AUX". This can cause feedback noise to occur.

Using headphones (not included) D

Reduce volume before connection.
Avoid listening for prolonged periods of time to prevent hearing damage.
Plug type: 3.5mm stereo

12 Self Diagnostic Function

Display procedure

Cassette tapes to be read
- Cassette tape with erasure-prevention tab removed on one side only (A or B).
- Music cassette tape with erasure-prevention tabs intact on both sides (A and B).

Note: In either case, rewind the cassette tape to about the middle.

To enter the self-diagnostic mode
1. Connect the unit to the power supply and turn the power on.
2. Set reverse mode to " ⟹ ". (Use the remote control attached with main unit, since the reverse mode cannot be set from the main unit.)
3. Check that there is no cassette tape in the compartment.
4. Hold down the TAPE/CD STOP key (■) for at least 2 seconds, and then keep pressing together with the tape deck FF button for another 2 seconds. "T" will then appear on the LCD display. (This indicates that the unit has switched from normal display mode to self-diagnostic mode.)

To view the display
- **To view the self-diagnostic display for the DECK 1 and DECK 2:**

1. Load a cassette tape into tape DECK 1 with the erasure-prevention tab removed on one side only (A or B).
2. Press the FF button, perform the fast forward winding operation for about 5 seconds and then stop winding using the stop button (■).
3. Remove the cassette tape, and load a music cassette (containing at least 4 seconds of music and both erasure-prevention tabs intact.
4. Press the TAPE play button (◀ ▶). When play begins, press either the FF button or the REW , and perform the TPS (Tape Program Search) operation in the direction in which the music is recorded.
5. After TPS operation has completed (when the beginning of music is found and the unit switches back to play mode), stop the tape by pressing the TAPE/CD STOP button (■).
6. Repeat steps 1 ~ 5 above for DECK 2.
7. If an error is detected when the tape deck TAPE/CD STOP button (■) is pressed, a self-diagnostic display appears on the LCD display. (If no error occurs, the LCD display shows the tape counter.). If there is more than one error, the error display changes each time the tape deck Stop button (■) is pressed. To change between the self-diagnostic display for tape DECK 1 AND tape DECK 2, press the tape deck select button (DECK1/2).

- **To view the self-diagnostic display for the CD player :**

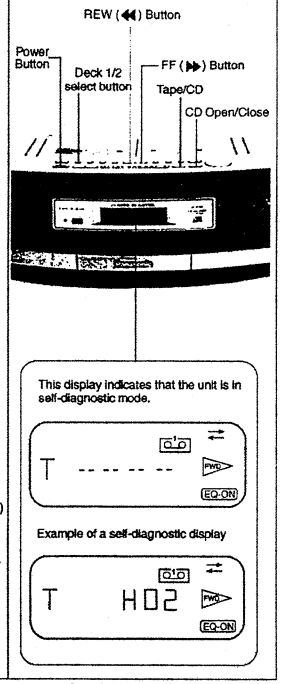
1. Press the CD Open / Close button (▲) to open the CD tray.
2. After the tray has been fully open for about 5 seconds, press the CD Open / Close button (▲) again to close the CD tray.
3. Press the stop button, self-diagnostic display on the LCD display (If no error occurs, LCD display shows "T").

Note: If this procedure is performed for tape DECK 1, DECK 2 and the CD player and an error occurs for each, the LCD display alternates between the self-diagnostic codes for tape DECK 1 and 2 and the CD player each time the TAPE/CD STOP button (■) is pressed. (If there is no error, the LCD display shows the tape counter.)

To return to normal display mode
- Press the power switch once to turn the power off, then press it again to turn the power back on. To view the self-diagnostic display once again, perform steps 1 ~ 4 of "Entering self-diagnostic mode" above, then press the TAPE/CD STOP button (■).

Clearing the self-diagnostic memory
- The self-diagnostic error code is stored in memory. To clear memory, first correct the error, and then remove the batteries (including the clock / memory batteries) and disconnect the AC power supply. Then press and hold down the power supply button for at least 5 seconds.
- Always be sure to clear memory after an error has been corrected.

Display location



Display content **Note : Items marked with (*) are automatically displayed, and do not require the procedure describe in the section "Viewing the display".**

Display Code	Symptom or condition	Cause and method of correction
*U01	When operating on batteries, power goes off immediately after being turned on.	The batteries are depleted. Replace with new batteries.
*U02	Power cannot be switched on.	Check the power cord (AC) or insert fresh batteries.
H01	Cassette deck does not operate correctly.	Faulty cassette deck mechanism mode detection switch (DECK 1 : S951, DECK 2: 971), reel motor and plunger. (Check and replace)
H02	Units does not record, or the unit goes into recording mode even when the erasure prevention tabs have been removed from the cassette.	Faulty erasure-prevention tab detection switch (S974, S975) or short circuit. (Check and replace)
H03	Tape does not play, even when the tape deck play button is pressed. The motor operates when the tape deck play button is pressed, even when no cassette is loaded in the deck.	Faulty tape detection switch (DECK 1: S952, DECK 2: S972) or short-circuit. (Check and replace).
H15	The CD tray closes immediately after it is opened.	Faulty contact of the CD tray open detection switch (SW790). (Check and replace)
H16	The CD tray opens immediately after it is closed.	Faulty contact of the CD tray close detection switch (SW791). (Check and replace)
F01	When the play button is pressed, the tape advances only slightly and then stops.	Reel pulse error. (Faulty Hall IC) (Check and replace)
F02	TPS (Tape Program Search) does not work.	Faulty TPS signal detection or faulty plunger control. (Check and replace mechansim control IC)
F15	When the CD Play button is pressed when either the power is off, or from some function other than CD, it takes excessive time (10 seconds or more) for the CD to play.	Faulty traverse inner circumference position detection switch (S701). (Check and replace)
*F26	When the CD operation mode is selected by pressing the Stop button (■), "F26" is shown on the LCD display, and a CD does not play when it has been loaded.	Communication error between servo-processor IC and microprocessor IC. (Check and replace)
F75	When a CD is loaded, "NO DISC" is displayed and the CD does not play.	Faulty CD circuit power supply. (Faulty power supply IC or CD circuit power supply system.) (Check and replace). Flexible circuit board has become disconnected or broken wiring. (Check and replace) Faulty servo-processor IC. (Check and replace)

13 Operation Checks and Main Component Replacement Procedures

"ATTENTION SERVICER"

Some chassis components maybe have sharp edges. Be careful when diassembling and servicing.

Content

- **Checking Procedure for each major P.C.B.**
  1. Checking for the Panel, Main & Lighting P.C.B ..... P.g. 12 ~ 13
  2. Checking of the CD Servo P.C.B ..... P.g. 13 ~ 14
- **Disassembly and Assembly of Traverse Deck** ..... P.g.14 ~ 15
- **Main Component Replacement Procedures** ..... P.g.15 ~ 16

Warning:

This product uses a laser diode. Refer to P.3.

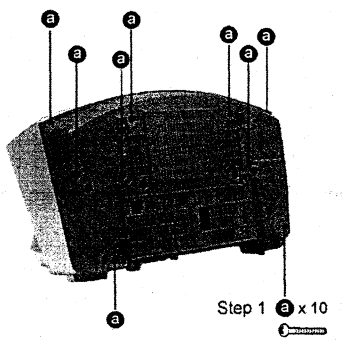
ACHTUNG:

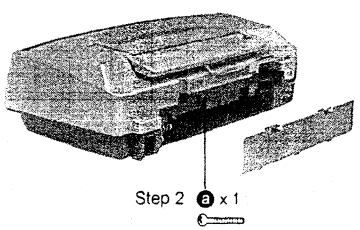
Die Lasereinheit nicht zerlegen.

Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

13.1. Checking Procedure for each major P.C.B.

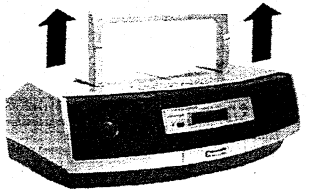
13.1.1. Checking for the Panel, Main & Lighting P.C.B.





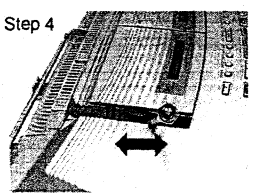
Step 2: Remove the battery cover.

Step 3



Step 3: Remove the handle as shown.

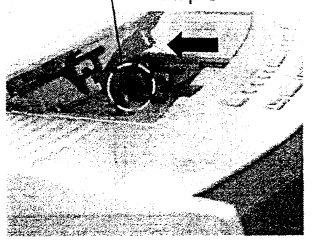
Step 4



Step 4: Use a screw driver and insert it to the hole shown. Slide the screw driver to either direction to open the left cassette lid.

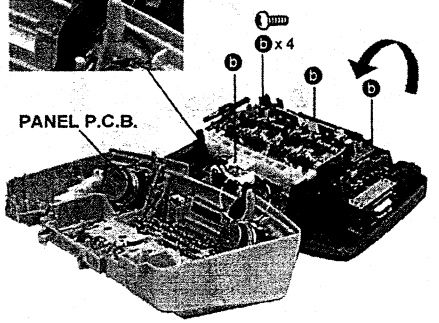
Lock Rod

Step 5



Step 5: To open the other cassette lid, use your finger to push the lock rod to the direction shown.

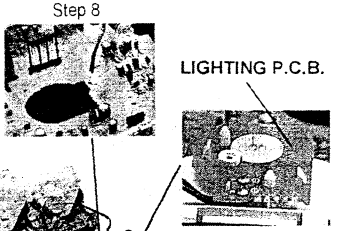
Step 6



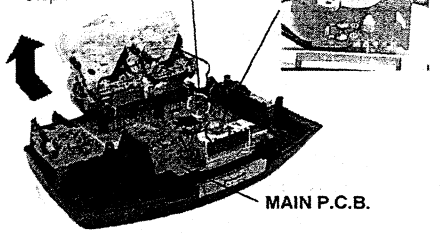
Step 6: Remove the FFC wire from CS1001 & CS1002 and remove the front cabinet together with the Panel P.C.B.

Step 8

LIGHTING P.C.B.



Step 7

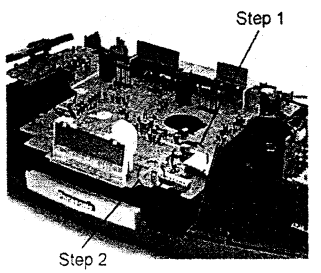


Step 7: Lift up the cassette deck mechansim.

Step 8: Remove the wire from CP981.

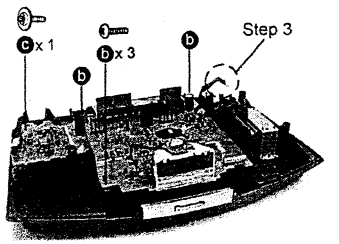
13.1.2. Checking for CD Servo P.C.B.

Step 1

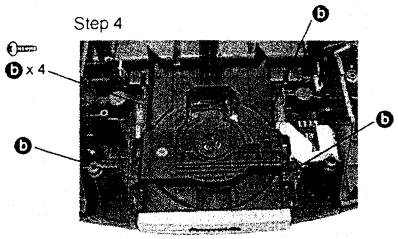


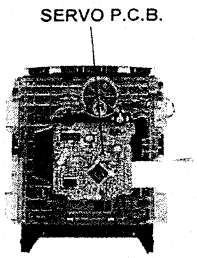
Step 1: Remove the FFC wire from CS707.

Step 2: Remove the wire from CP702.

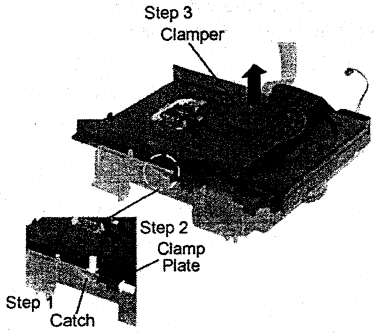


Step 3: Remove the wire from CP901 which is mounted on transformer P.C.B.. Take out the Main P.C.B..





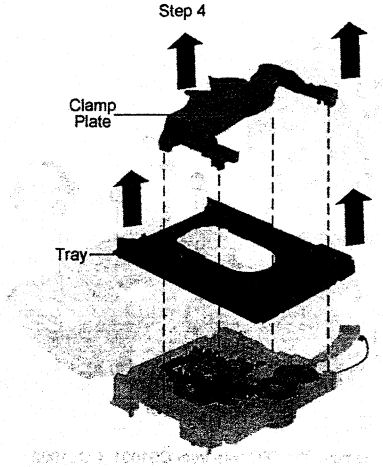
13.2. Disassembly and Assembly of Traverse Deck



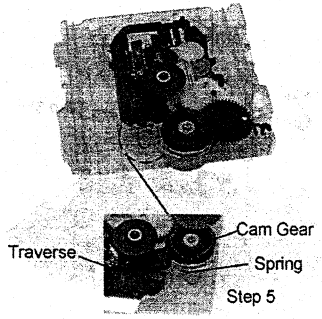
Step 1: Press down both catches on both side as shown.

Step 2: Push the clamp plate towards the catches.

Step 3: Pull the clamper away from the magnet situated inside the fixed plate.

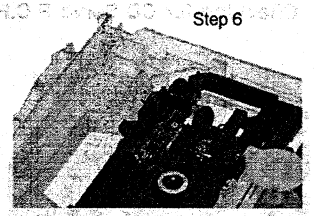


Step 4: Remove the clamp plate and tray in sequence.

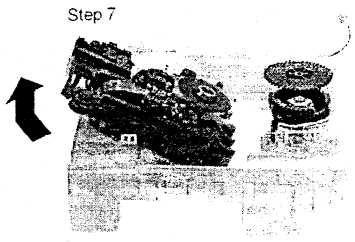


Step 5: Push the cam gear drive to about 30° anticlockwise.

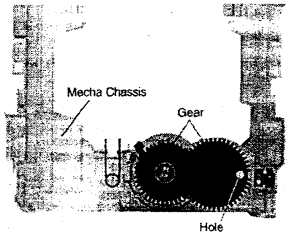
Shift the spring away from the traverse.



Step 6: Press on the catch on both sides one at a time. While pressing, shift the traverse up in the manner of left to right.

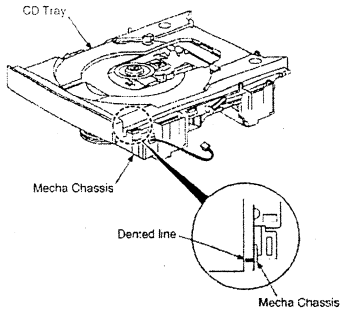


Step 7: Take out the traverse in a slanting manner.



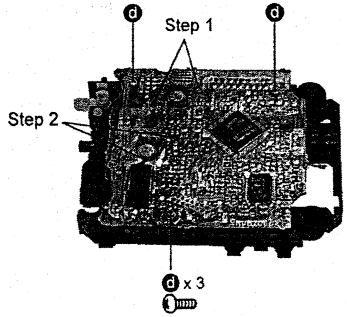
Note:

1. Follow the reverse procedure to replace the CD Traverse Unit and CD Tray.
2. Make sure that the two gear is in this position and the hole on the right gear is align with the hole below it when replacing the CD Traverse Unit and CD Tray.



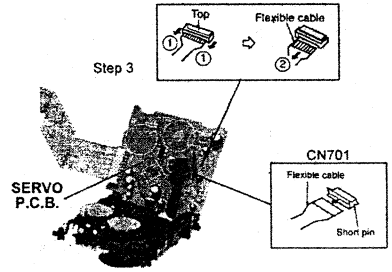
Note: When replacing the CD Tray, make sure the dented line is at position as shown.

13.3. Main Component Replacement Procedures



Step 1: Desolder 2 terminals of the traverse motor.

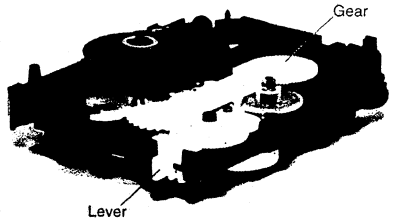
Step 2: Desolder 2 terminals of the spindle motor.



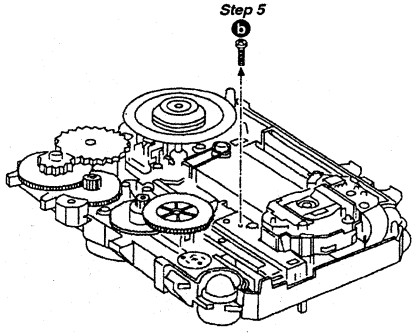
Step 3: Remove the flexible calbe from CN701.

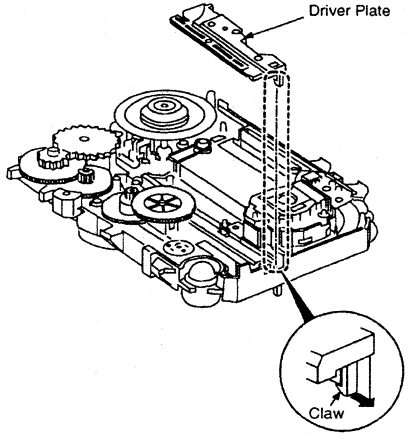
- Removal of the flexible cable.

  Push the top of the connector in the direction of arrow 1 and pull out the flexible cable in the direction of arrow 2.

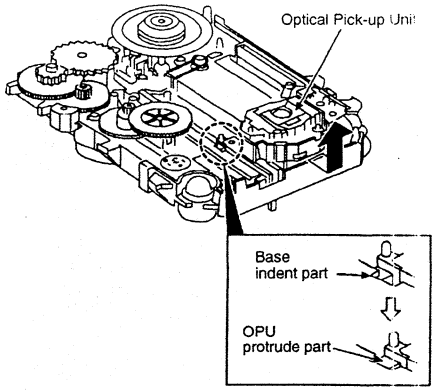


Step 4: Push the lever in and turn the gear clock wise fully.

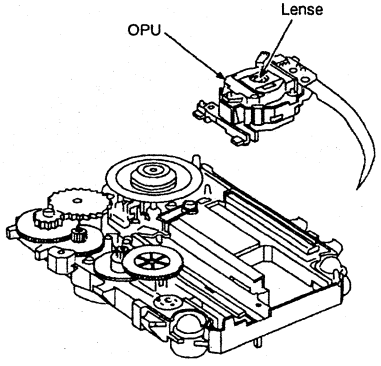




Step 6: Release the claw and remove the Driver Plate.



Step 7: Slide out the Optical Pick-up Unit from the indent opening.



Step 8: Do not touch the lense on the OPU.

14 Schematic Diagram

Notes:

S701	Rest Swtich
S951	Mode Switch
S952	Cassette Tape Detect Switch
S953	CrO2 Tape Detect Switch
S971	Mode Switch
S972	Cassette Tape Detect Switch
S973	Cro2 Tape Detect Switch
S974	Reverse Side Record Prevention Tab Detect Switch
S975	Forward Side Record Prevention Tabe Detect Switch
S1001	CD OPEN/CLOSE Switch
S1002	Deck 2 Eject Switch
S1003	Clock Switch
S1004	Play/Record Switch
S1005	Tape/CD Stop Switch
S1006	Tape Edit Switch
S1007	Deck 1/2 Switch
S1008	Deck 1 Eject Switch
S1009	Power on/off Switch
S1010	Volume Decrease (-)
S1011	Auxiliary Switch
S1012	Preset EQ Switch
S1013	FF/Tune TPS Switch
S1014	Rew/Tune TPS Switch
S1015	Record Stop/Pause Switch
S1016	CD Record Mode Switch
S1017	Volume Increase (+)
S1018	Tape Play Switch
S1019	Tuner AM/FM Switch
S1020	CD Play/Pause Switch
S1021	Time/Pre.Tuner/CD Jog Switch

- AM signal line
- AM/FM signal line
- MAIN signal line
- Playback signal line
- Record signal line
- CD signal line
- FM signal line
- AM OSC signal line
- AUX signal line
- +B line

- Volume minimum
  - 400 mA (FM)
  - 390 mA (AM)
  - 470 mA (TAPE)
  - 480 mA (CD)

- Volume maximum
  - 1.32 A (FM)
  - 1.36 A (AM)
  - 1.93 A (TAPE)
  - 2.15 A (CD)

Measurement condition:

Radio: FM 60 dB, 30% mod ; AM 74 dBm 30% mod

Tape: 315 Hz, 0 dB

CD: 1 kHz, 0 dB

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	...Playback	< >	...FM
(( ))	...CD	( )	...AM

Caution!

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

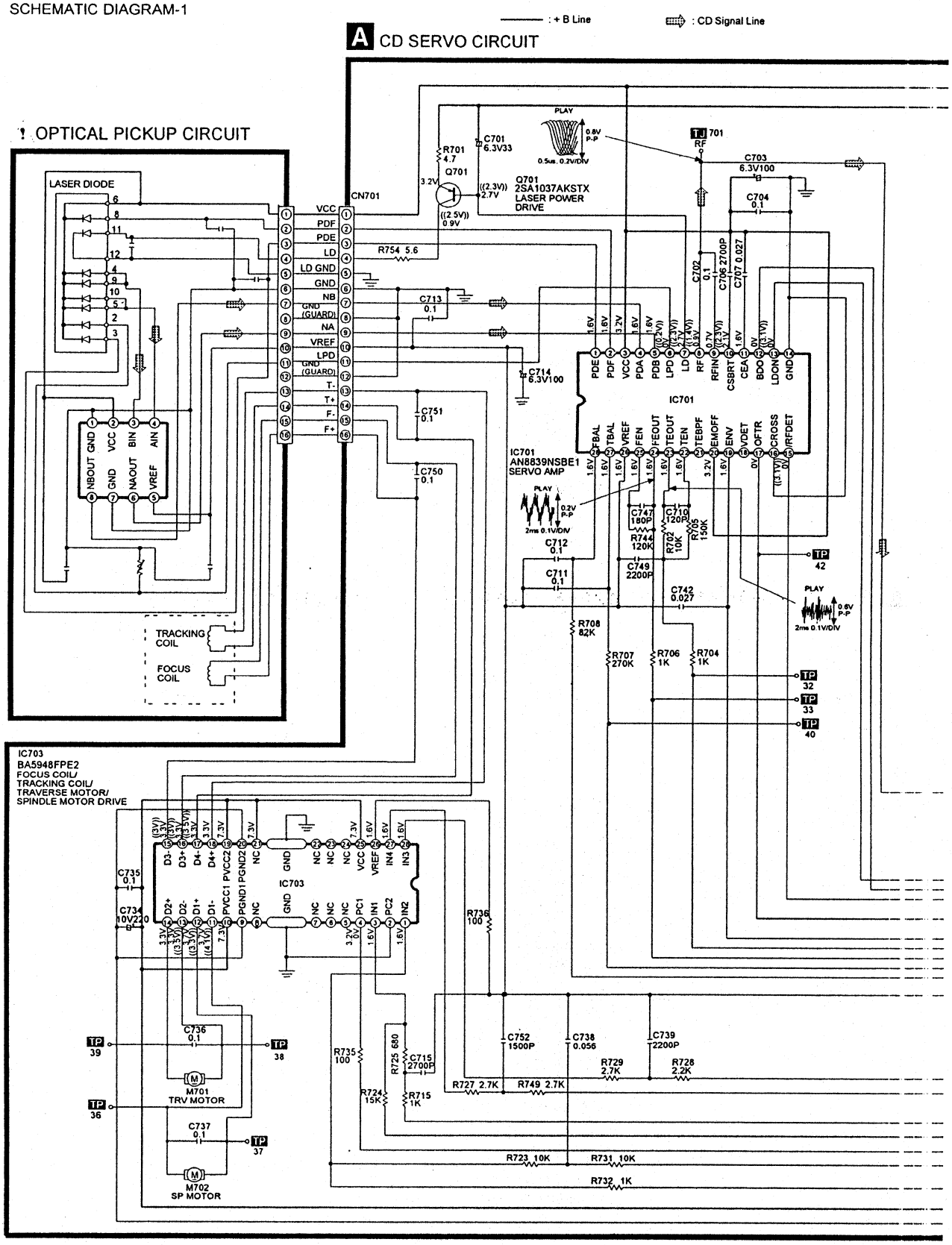
- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

- **Importance safety notice:**

  Components identifed by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

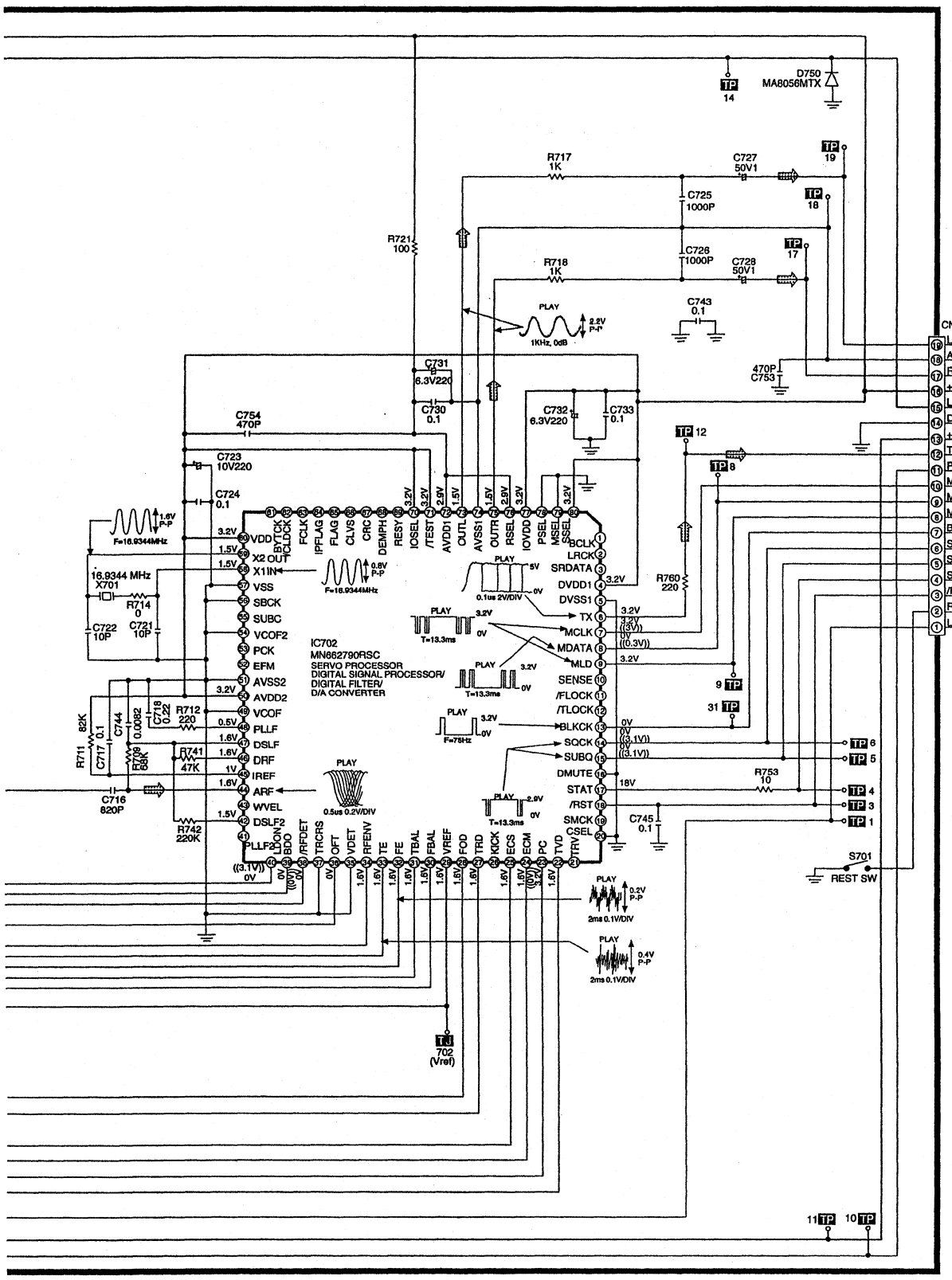
- This schematic diagram maybe modified at anytime with the development of new tecnology.

SCHEMATIC DIAGRAM-1



SCHEMATIC DIAGRAM-2

: + B Line : CD Signal Line

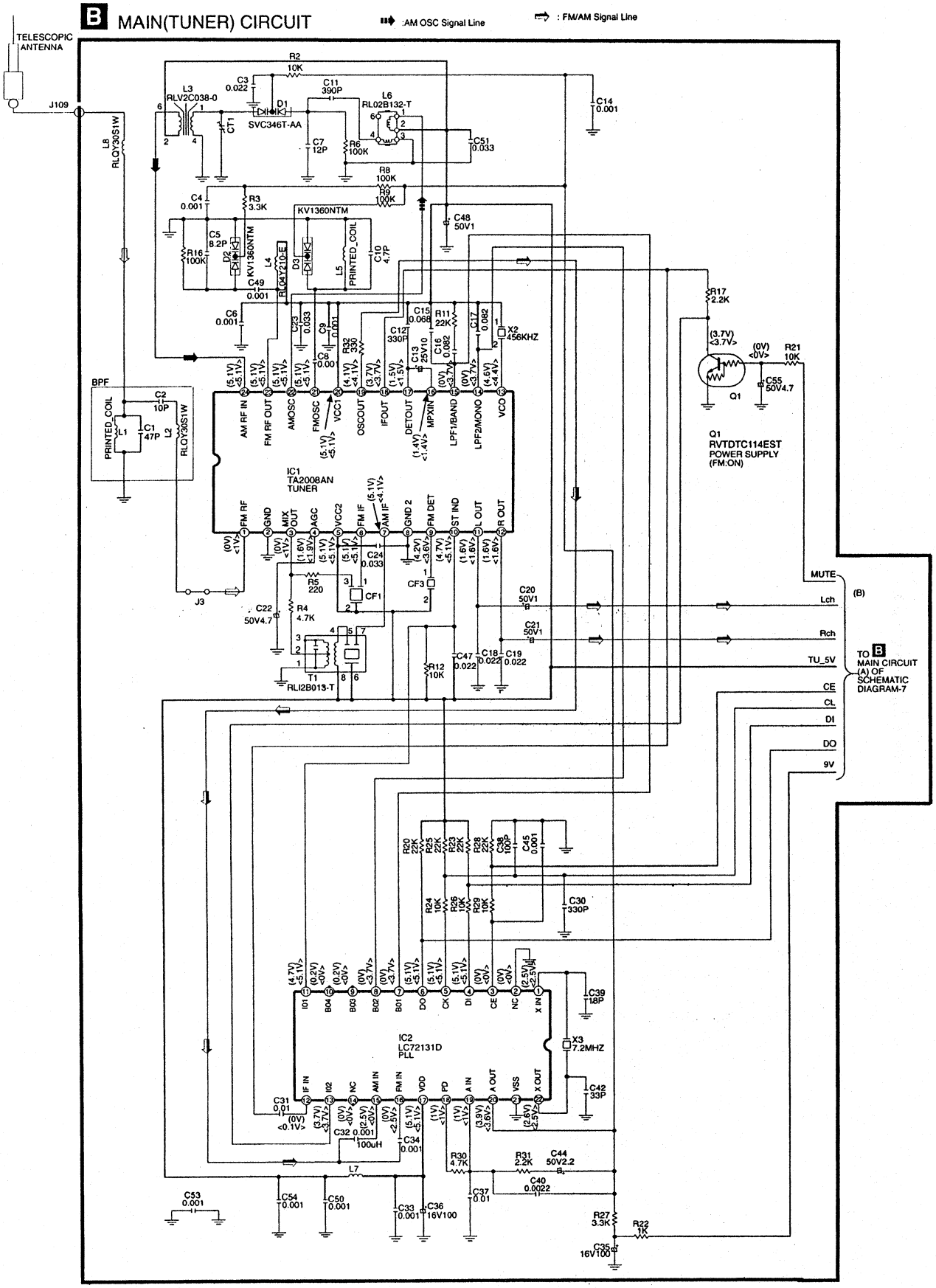


SCHEMATIC DIAGRAM-3

: + B Line : AM Signal Line : FM Signal Line

: AM OSC Signal Line : FM/AM Signal Line

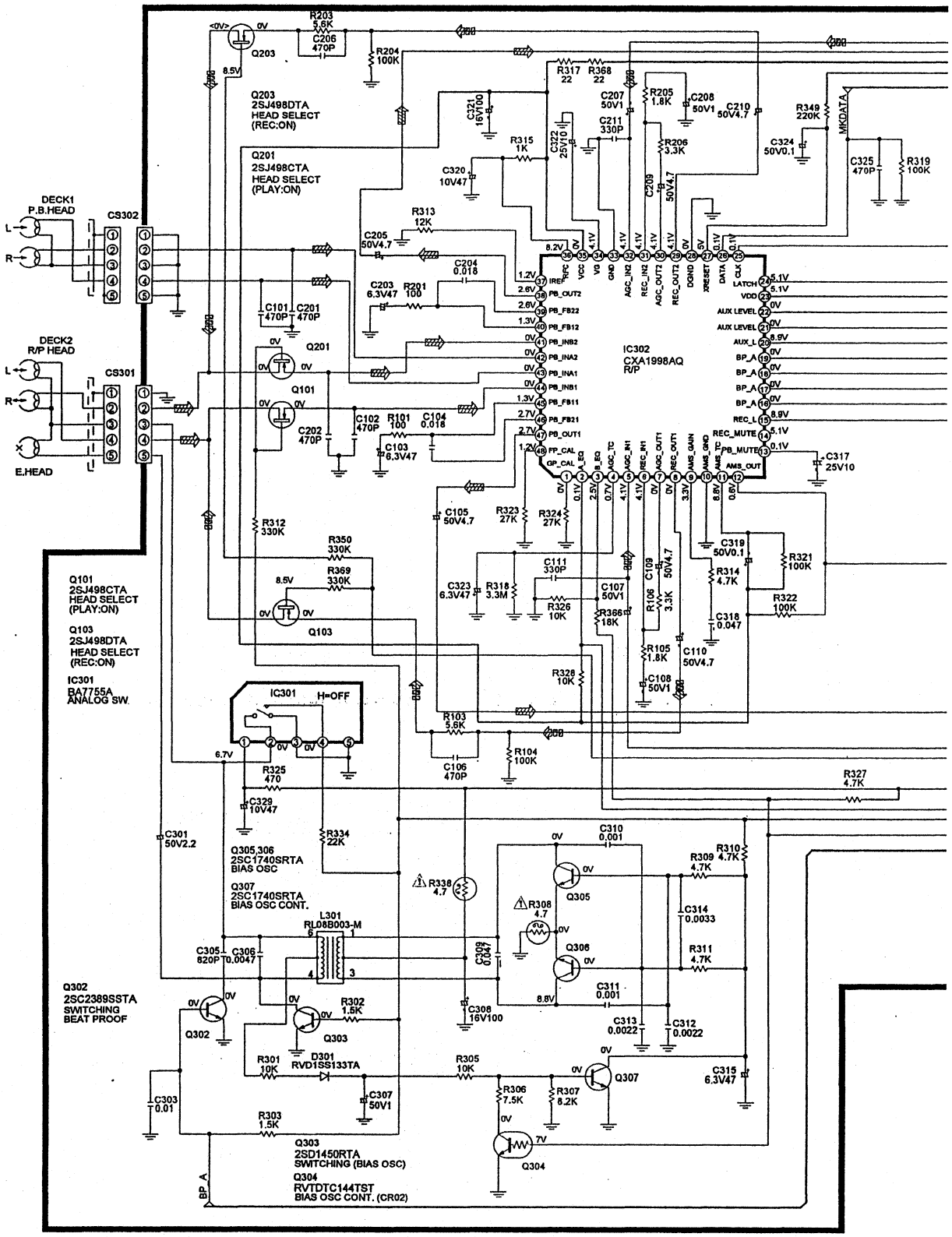
B MAIN(TUNER) CIRCUIT



SCHEMATIC DIAGRAM-4

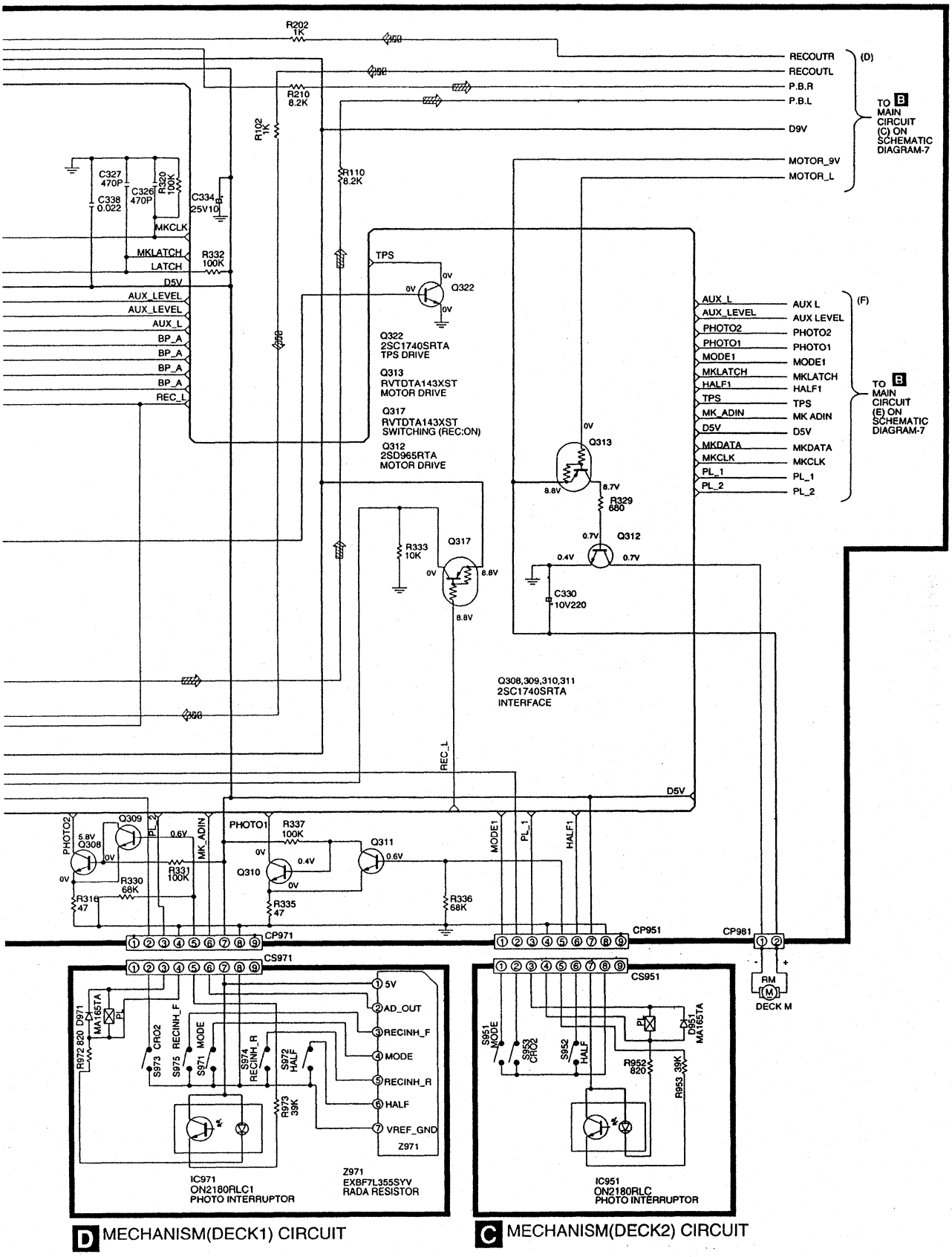
: + B Line : Playback Signal Line : Rec Signal Line

B MAIN (DECK) CIRCUIT



SCHEMATIC DIAGRAM-5

——— : + B Line : Playback Signal Line : Rec Signal Line



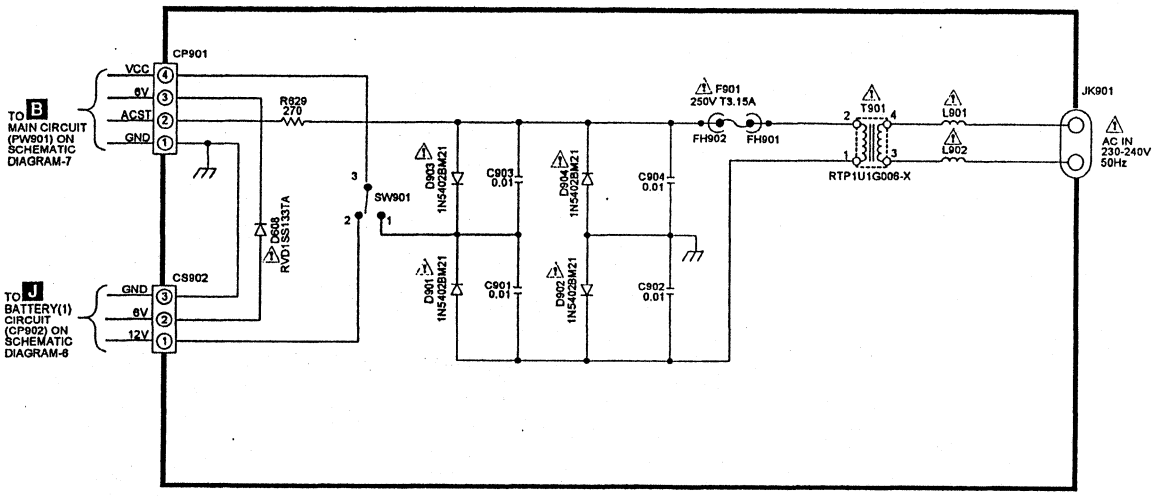
D MECHANISM(DECK1) CIRCUIT

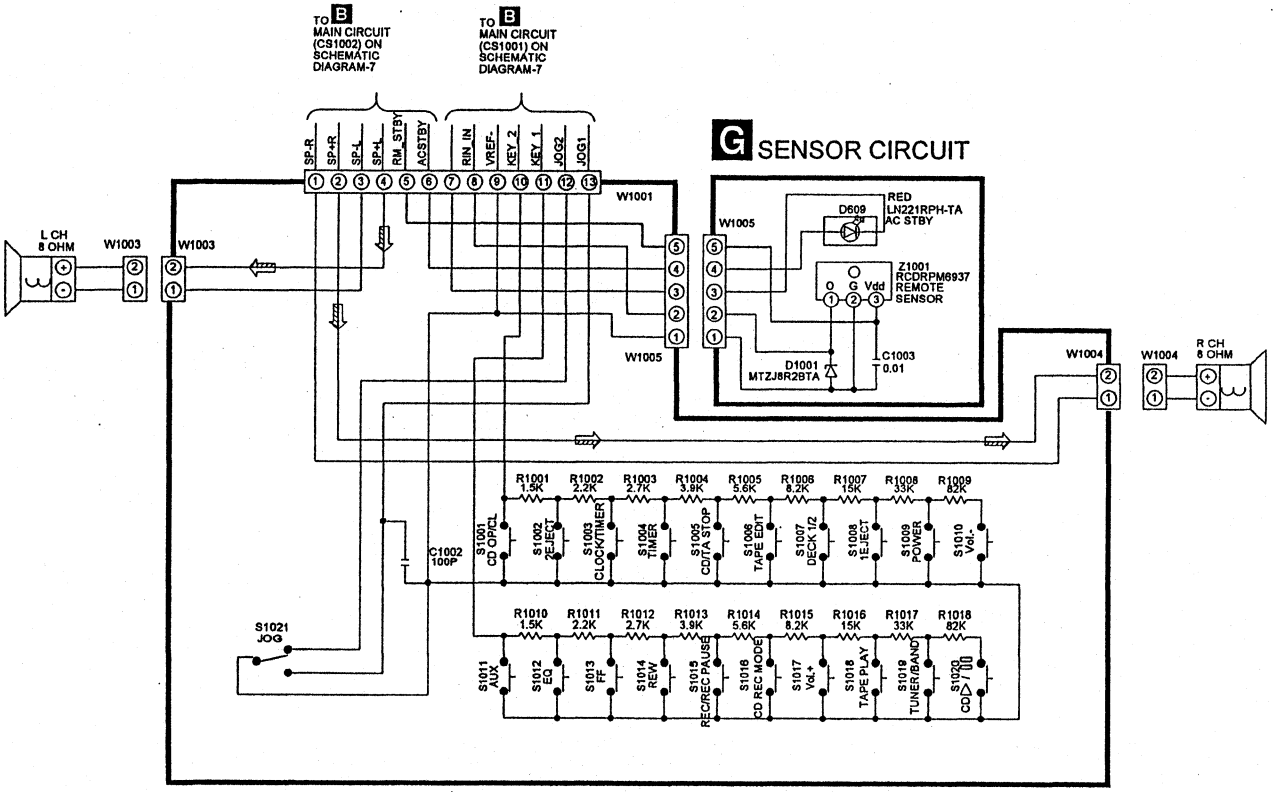
C MECHANISM(DECK2) CIRCUIT

SCHEMATIC DIAGRAM-6

——— : + B Line ⇨ : Main Signal Line

H POWER SUPPLY CIRCUIT

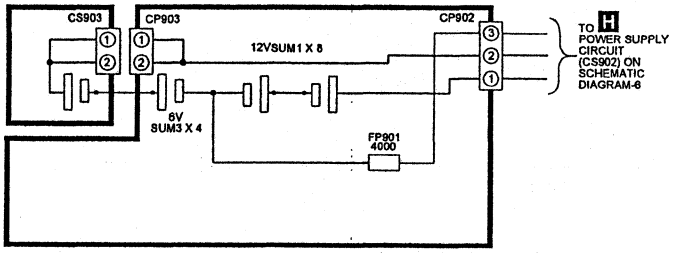




F PANEL CIRCUIT

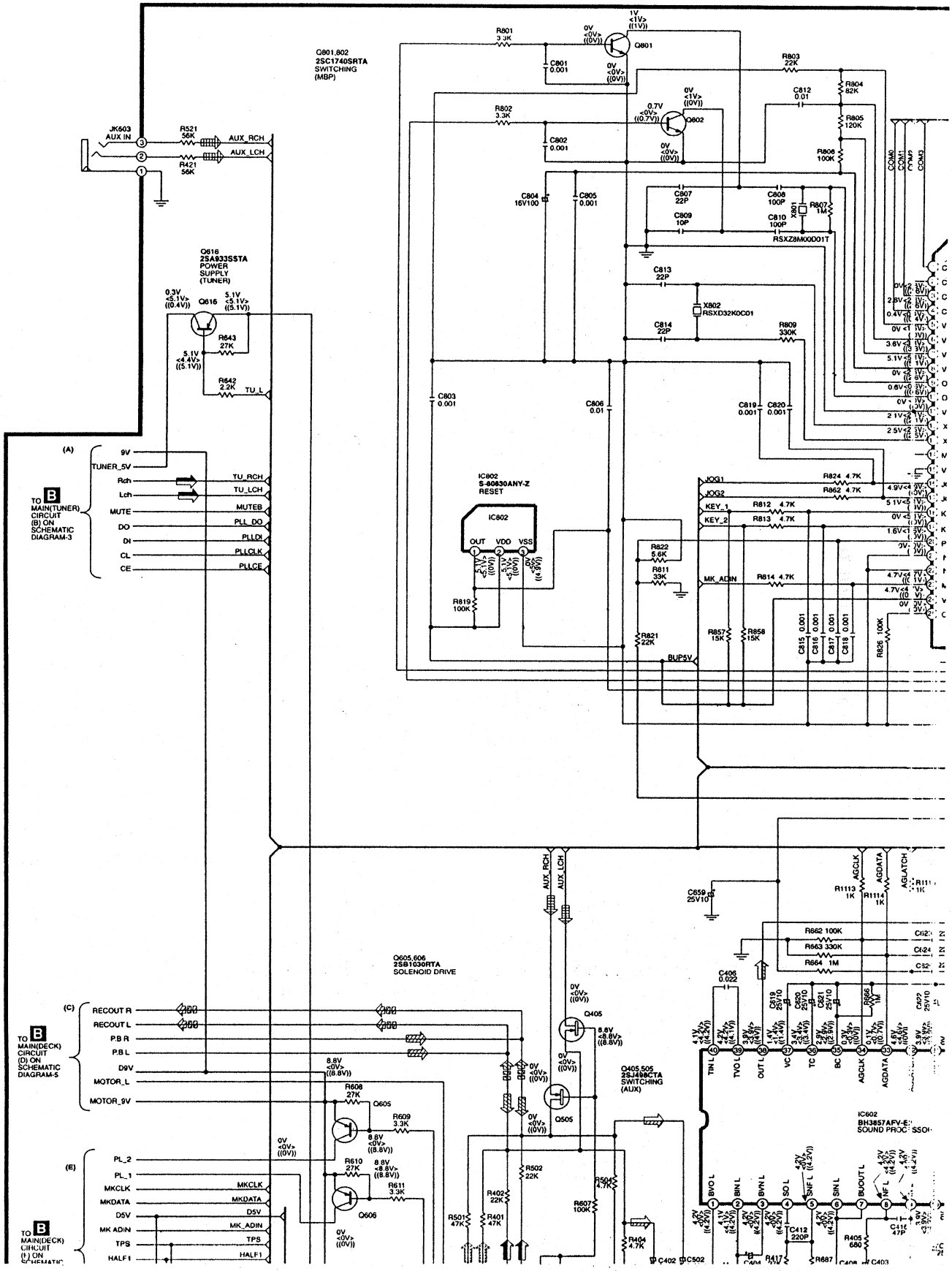
I BATTERY(2) CIRCUIT

J BATTERY(1) CIRCUIT

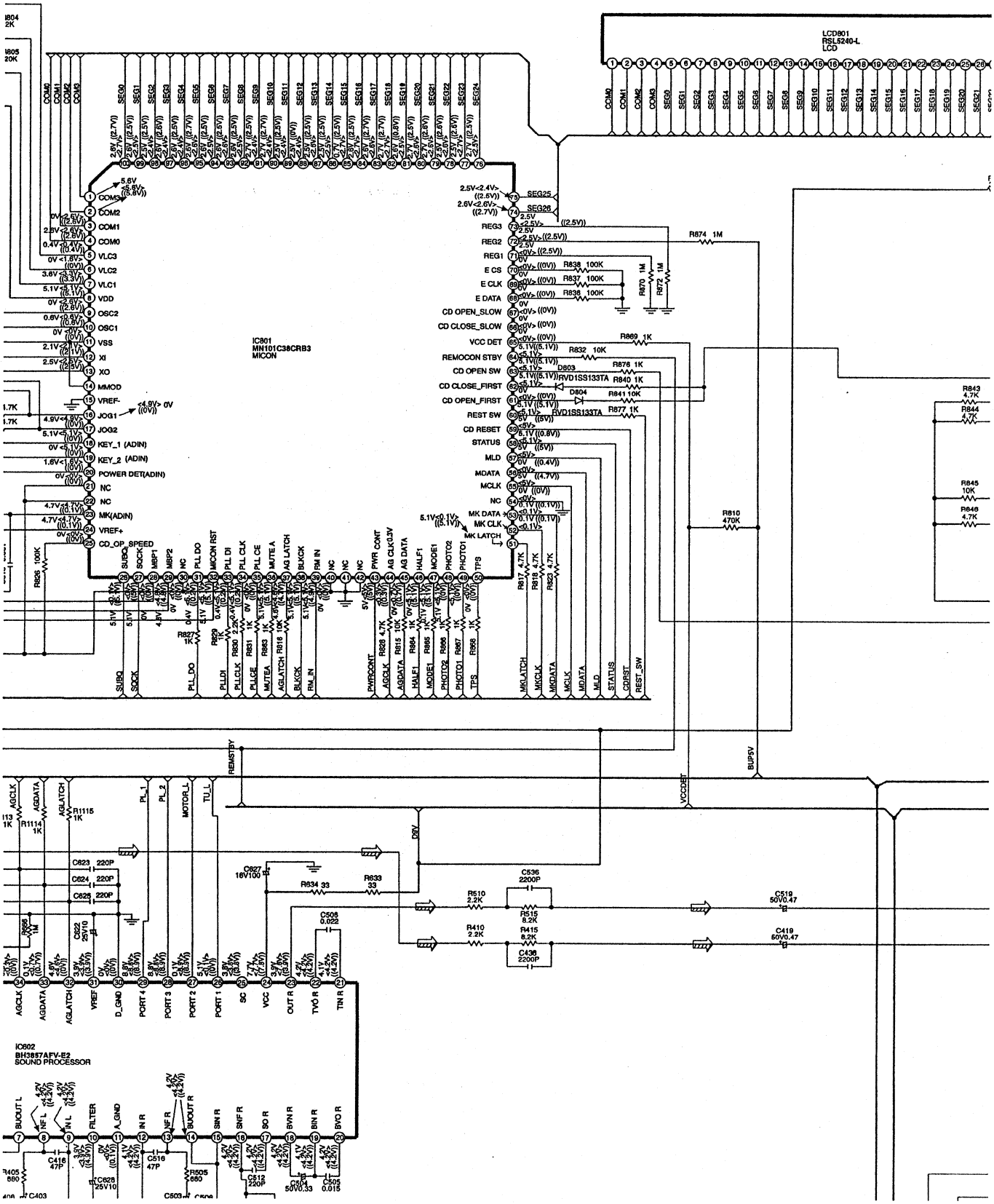


SCHEMATIC DIAGRAM-7

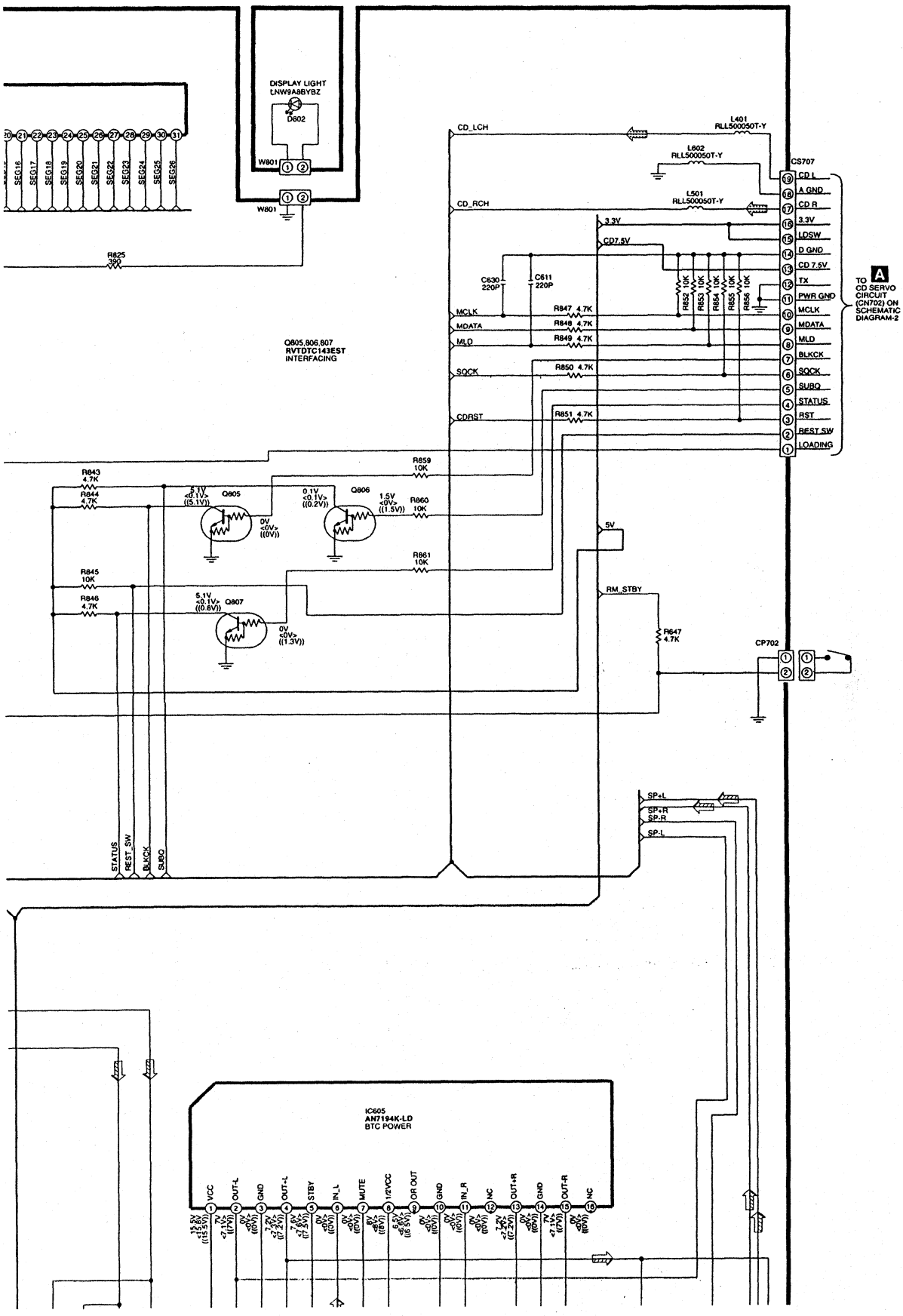
B MAIN CIRCUIT

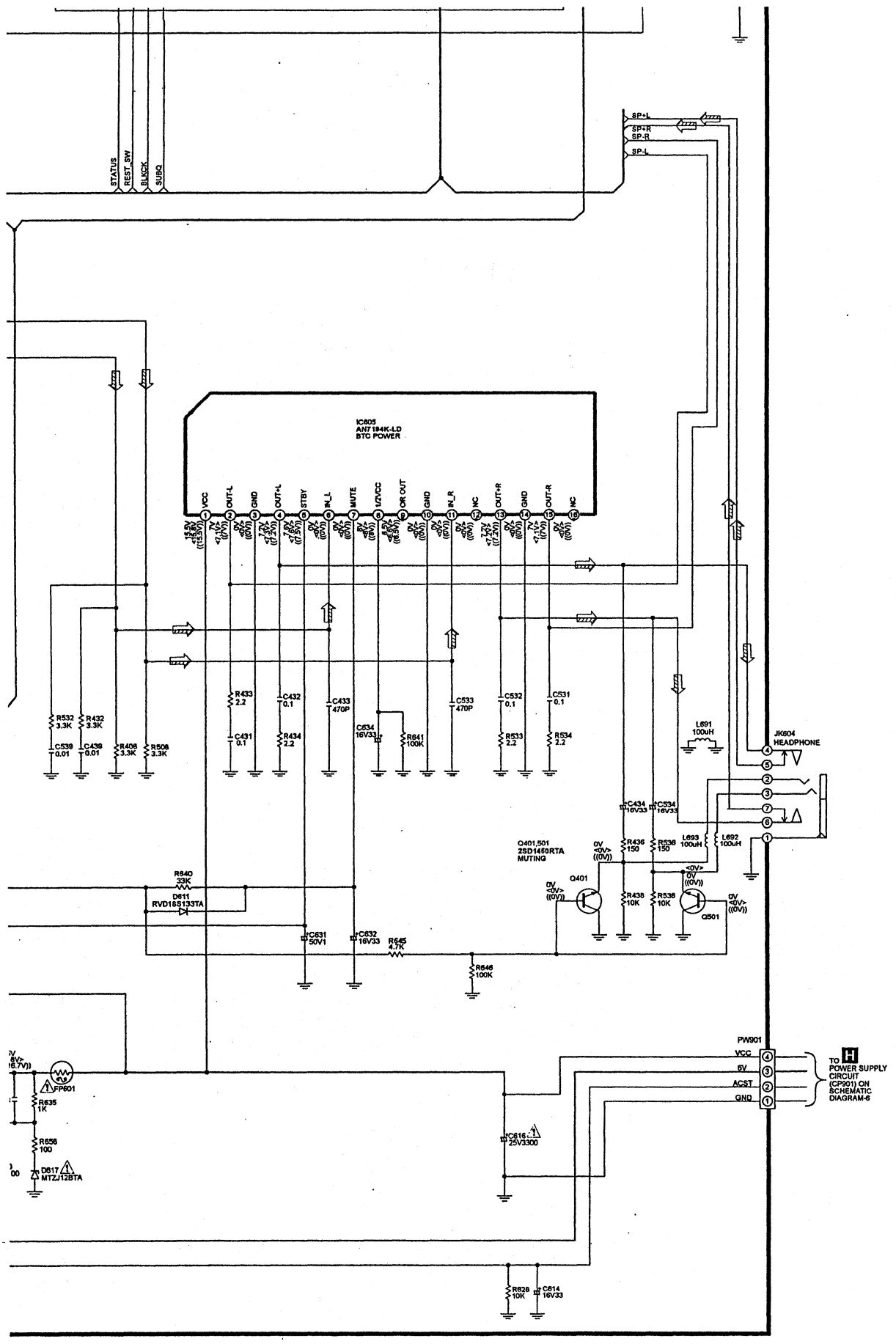


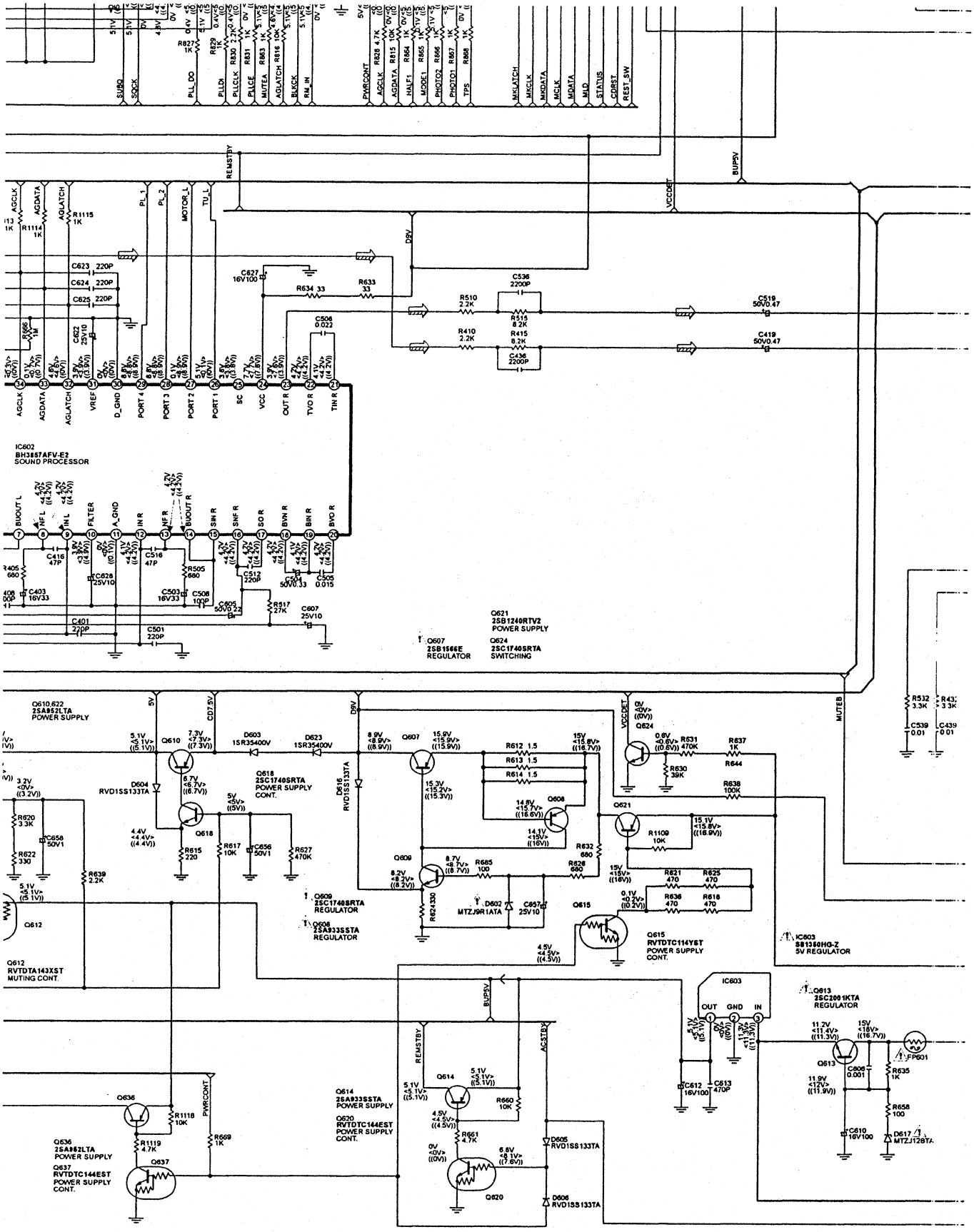
: + B Signal Line : Main Signal Line : Aux Signal Line : CD Signal Line
: Rec Signal Line : FM/AM Signal Line : Playback Signal

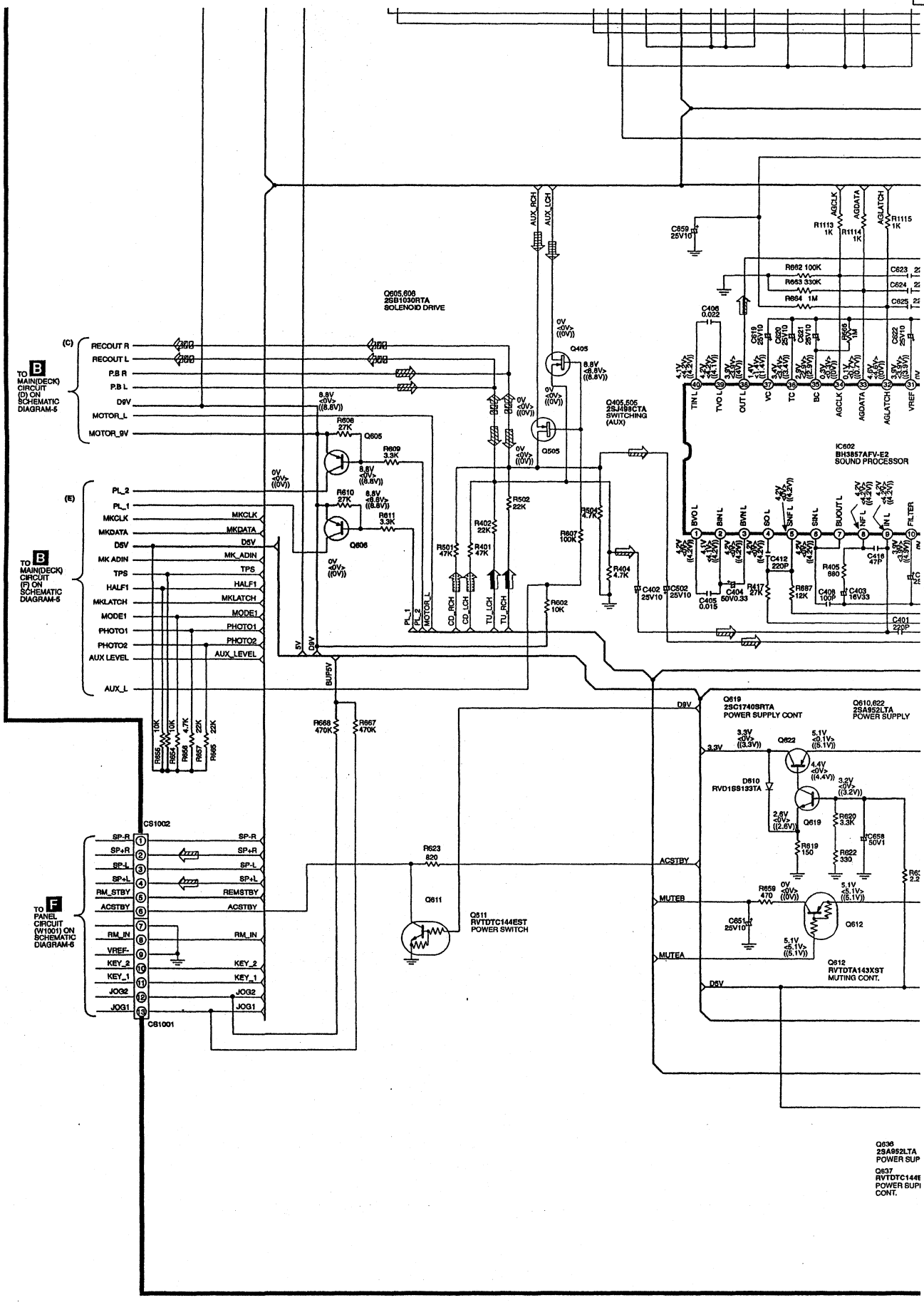


E SWITCH CIRCUIT

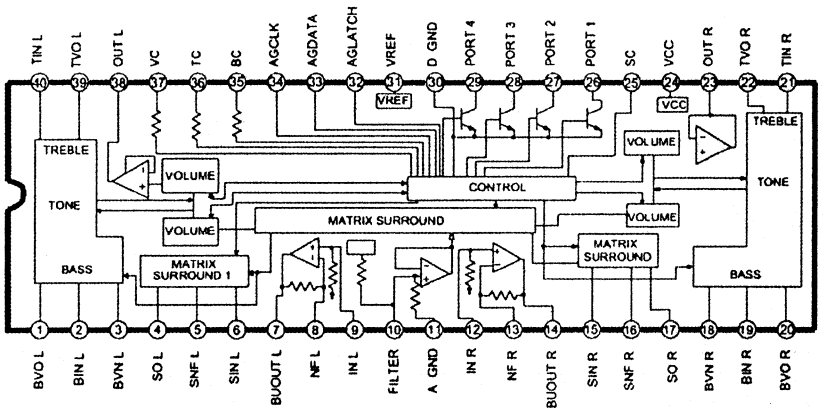



STATUS
REST_SW
BLKCK
SUBQ
SP+L
SP+R
SP-R
SP-L
IC605
AN7184K-LD
BTC POWER
VCC
OUT-L
GND
OUT+L
STBY
IN_L
MUTE
1/2VCC
CR OUT
GND
IN_R
NC
OUT+R
GND
OUT-R
NC
R532 3.3K
R432 3.3K
C539 0.01
C439 0.01
R408 3.3K
R508 3.3K
R433 2.2
C431 0.1
C432 0.1
R434 2.2
C433 470P
C634 16V33
R641 100K
C533 470P
C532 0.1
R533 2.2
C531 0.1
R534 2.2
L691 100uH
JK604 HEADPHONE
C434 16V33
C534 16V33
Q401,501 2SD1460RTA MUTING
R436 150
R536 150
L693 100uH
L692 100uH
Q401
R438 10K
R538 10K
Q501
R640 33K
D611 RVD16S133TA
C631 50V1
C632 16V33
R645 4.7K
R646 100K
FP601
R635 1K
R656 100
D617 MTZJ12BTA
C616 25V3300
R628 10K
C614 16V33
PW901
VCC
6V
ACST
GND
TO H POWER SUPPLY CIRCUIT (CP901) ON SCHEMATIC DIAGRAM-6


IC602
BH3857AFV-E2
SOUND PROCESSOR
Q607
2SB1566E
REGULATOR
Q621
2SB1240RTV2
POWER SUPPLY
Q624
2SC1740SRTA
SWITCHING
Q610,622
2SA952LTA
POWER SUPPLY
Q618
2SC1740SRTA
POWER SUPPLY
CONT.
Q609
2SC1740SRTA
REGULATOR
Q608
2SA933SSTA
REGULATOR
Q615
RVTDTC114YST
POWER SUPPLY
CONT.
IC603
BB1360HG-Z
5V REGULATOR
Q612
RVTDTA143XST
MUTING CONT.
Q636
2SA952LTA
POWER SUPPLY
Q637
RVTDTC144EST
POWER SUPPLY
CONT.
Q614
2SA933SSTA
POWER SUPPLY
Q620
RVTDTC144EST
POWER SUPPLY
CONT.
Q613
2SC2001KTA
REGULATOR
D602
MTZJ9R1ATA
D603
1SR35400V
D604
RVD1SS133TA
D605
RVD1SS133TA
D606
RVD1SS133TA
D616
RVD1SS133TA
D617
MTZJ12BTA
FP601
REMSTBY
ACSTBY
BUPSV
VCCDET
MUTEB
OUT
GND
IN

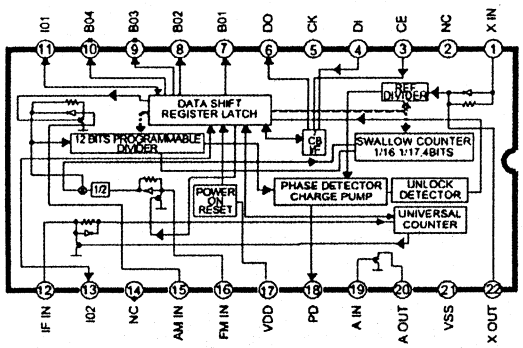

Q605,606
2SB1030RTA
SOLENOID DRIVE
Q405,505
2SJ498CTA
SWITCHING
(AUX)
IC602
BH3857AFV-E2
SOUND PROCESSOR
Q619
2SC1740SRTA
POWER SUPPLY CONT
Q610,622
2SA952LTA
POWER SUPPLY
Q611
Q511
RVTDTC144EST
POWER SWITCH
Q612
RVTDTA143XST
MUTING CONT.
Q636
2SA952LTA
Q637
RVTDTC144E
CS1002
CS1001
TO B MAIN(DECK) CIRCUIT (D) ON SCHEMATIC DIAGRAM-5
TO B MAIN(DECK) CIRCUIT (F) ON SCHEMATIC DIAGRAM-5
TO F PANEL CIRCUIT (W1001) ON SCHEMATIC DIAGRAM-6
RECOUT R
RECOUT L
P.B R
P.B L
D9V
MOTOR_L
MOTOR_9V
PL_2
PL_1
MKCLK
MKDATA
D5V
MK ADIN
TPS
HALF1
MKLATCH
MODE1
PHOTO1
PHOTO2
AUX LEVEL
AUX_L
SP-R
SP+R
SP-L
SP+L
RM_STBY
ACSTBY
RM_IN
VREF-
KEY_2
KEY_1
JOG2
JOG1
AUX_RCH
AUX_LCH
AGCLK
AGDATA
AGLATCH
R1113 1K
R1114 1K
R1115 1K
R662 100K
R663 330K
R664 1M
C406 0.022
C859 25V10
C623
C624
C625
TIN L
TVO L
OUT L
VC
TC
BC
AGCLK
AGDATA
AGLATCH
VREF
BVO L
BIN L
BVO L
SO L
SNF L
SIN L
BUOUT L
NF L
IN L
FILTER
C412 220P
C401 220P
C402 25V10
C502 25V10
C405 0.015
C404 50V0.33
R417 27K
R687 12K
C408 100P
C403 16V33
R405 680
C418 47P
R606 27K
R609 3.3K
R610 27K
R611 3.3K
R608 470K
R667 470K
R655 10K
R654 10K
R656 4.7K
R657 22K
R658 22K
R623 820
R659 470
R619 150
R620 3.3K
R622 330
C658 50V1
C651 25V10
R502 22K
R402 22K
R401 47K
R501 47K
R807 100K
R504 4.7K
R404 4.7K
R602 10K
D610
RVD1SS133TA
ACSTBY
MUTEB
MUTEA
D9V
5V
BUP5V
3.3V
PL_1
PL_2
MOTOR_L
CD_RCH
CD_LCH
TU_LCH
TU_RCH

15 IC Internal Circuitry

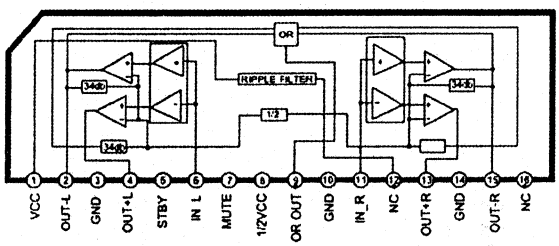


IC602
BH3857AFV-E2
SOUND PROCESSOR

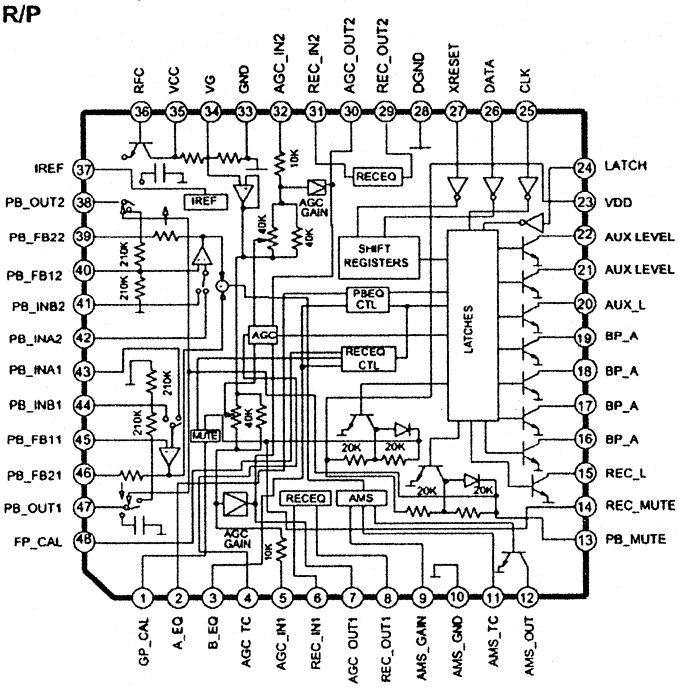
IC2
LC7213D
PLL



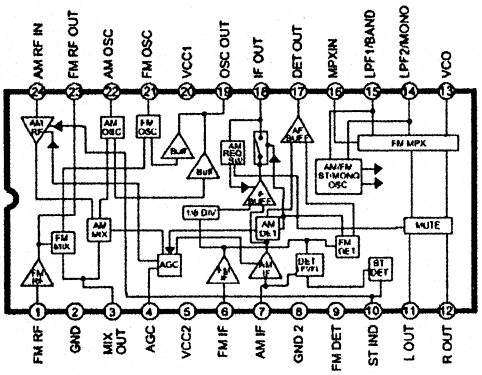
IC605
AN7194K-L
BTC POWER



IC302
CXA1998AQ
R/P

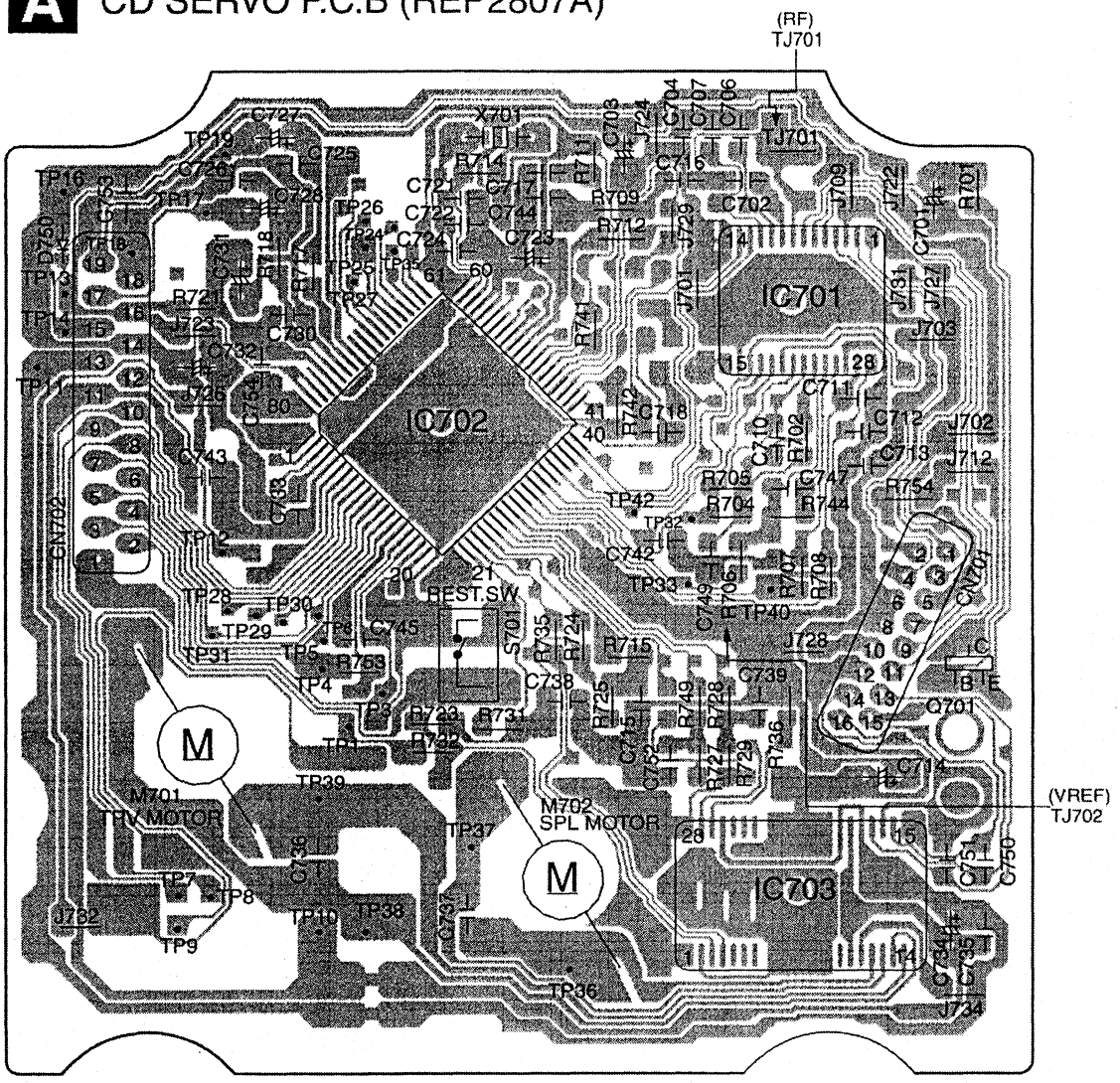


IC1
TA2008AN
TUNER

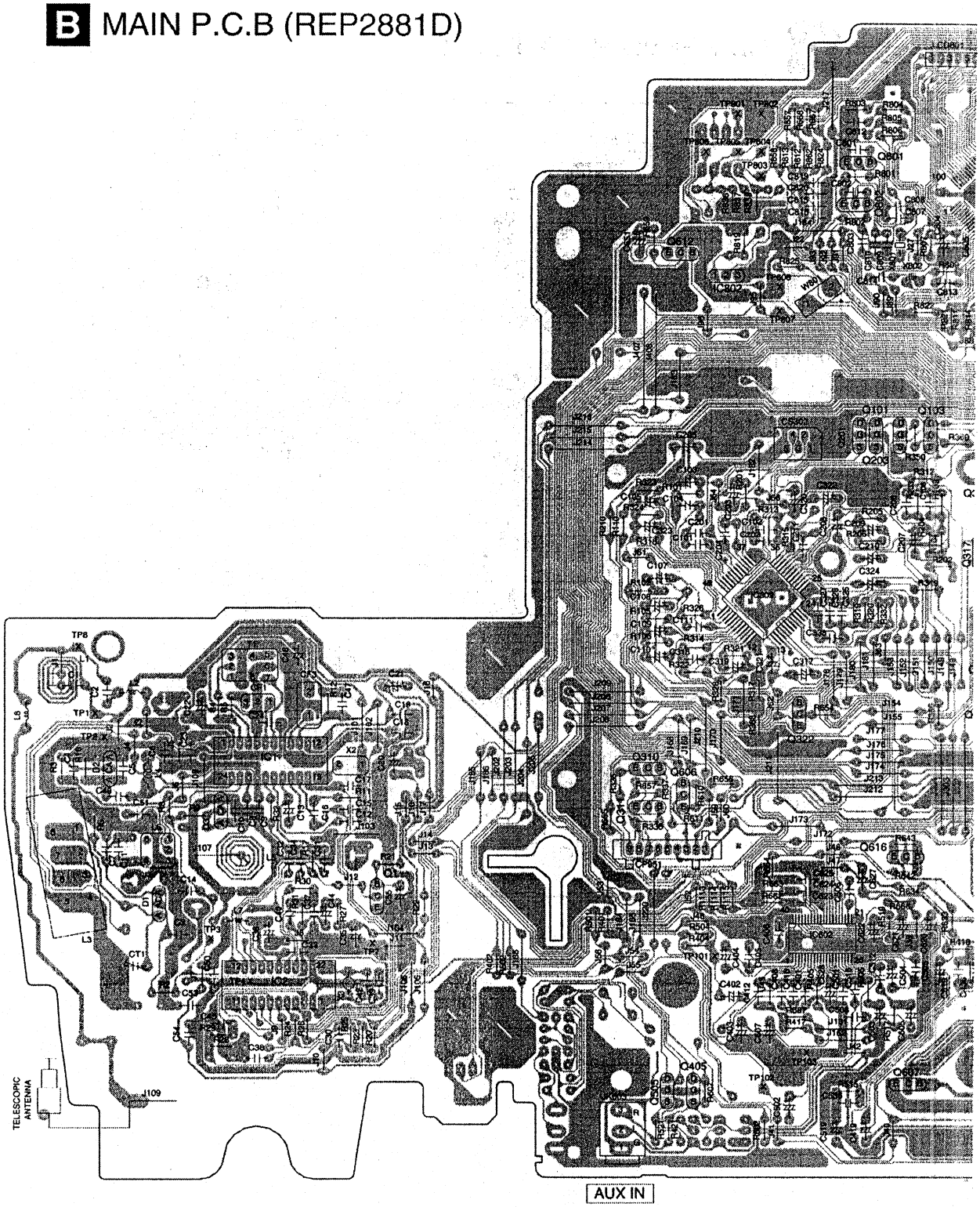


16 Printed Circuit Board

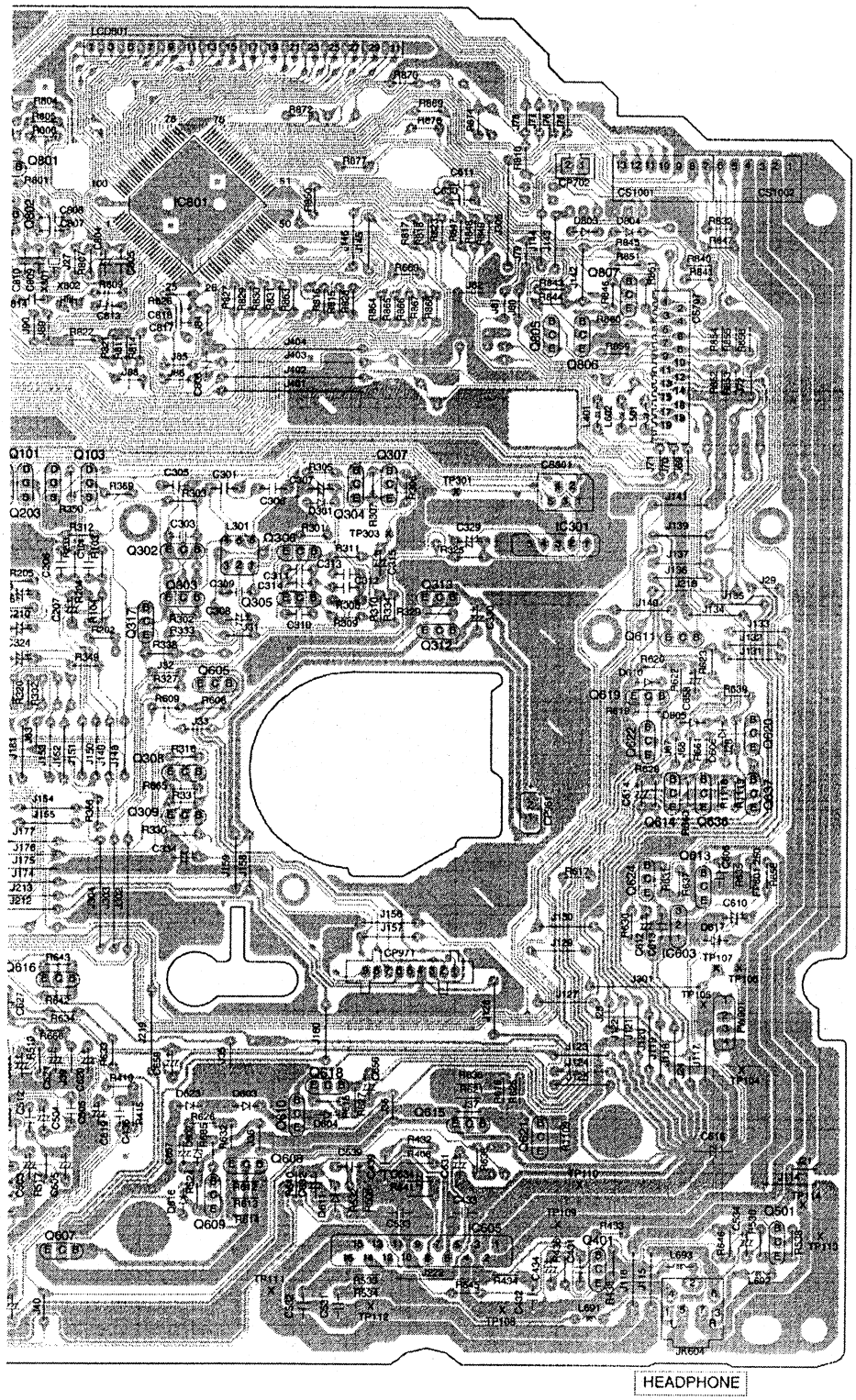
A CD SERVO P.C.B (REP2807A)



B MAIN P.C.B (REP2881D)



G H I J K L M



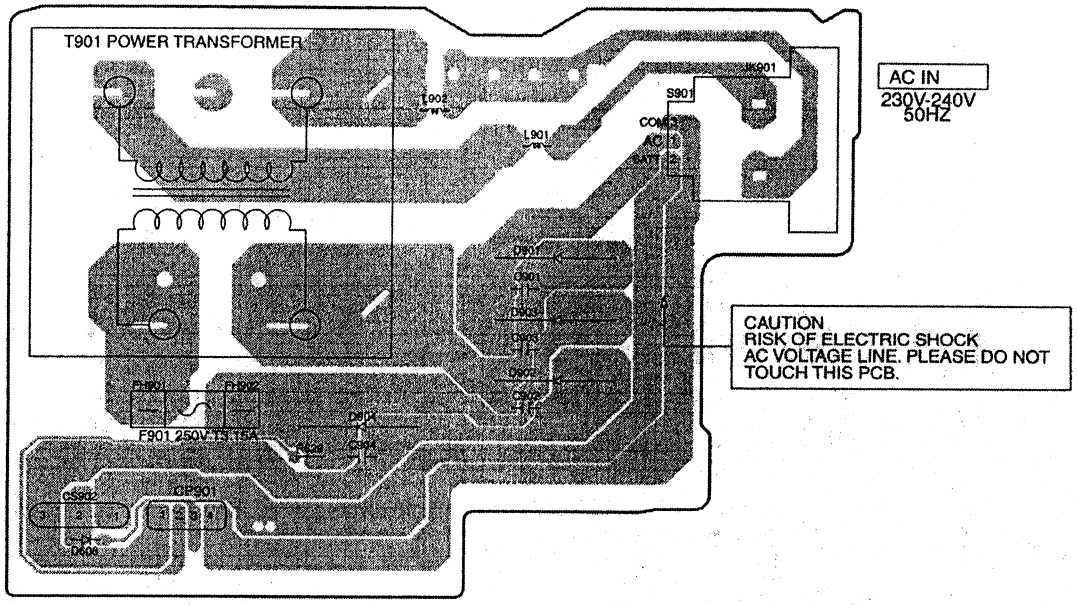
HEADPHONE

Ref. No.	Loc. No.	Ref.No.	Loc.No.
Q101	G4	Q611	J5
Q103	G4	Q612	F3
Q201	G4	Q613	J6
Q203	G4	Q614	J6
Q302	G5	Q615	I8
Q303	G5	Q616	G7
Q304	I4	Q618	H8
Q305	H5	Q619	J5
Q306	H4	Q620	K6
Q307	I4	Q621	I8
Q308	G6	Q622	J6
Q309	G6	Q624	J6
Q310	E6	Q636	J6
Q311	E7	Q637	K6
Q312	I5	Q801	G2
Q313	I5	Q802	G2
Q317	G5	Q805	I3
Q322	F6	Q806	J3
Q401	J9	Q807	J3
Q405	F9	IC1	C6
Q501	K9	IC2	C8
Q505	F9	IC301	I4
Q605	G5	IC302	F5
Q606	F7	IC602	F8
Q607	G9	IC603	J7
Q608	H8	IC605	I9
Q609	G8	IC801	G2
Q610	H8	IC802	G2

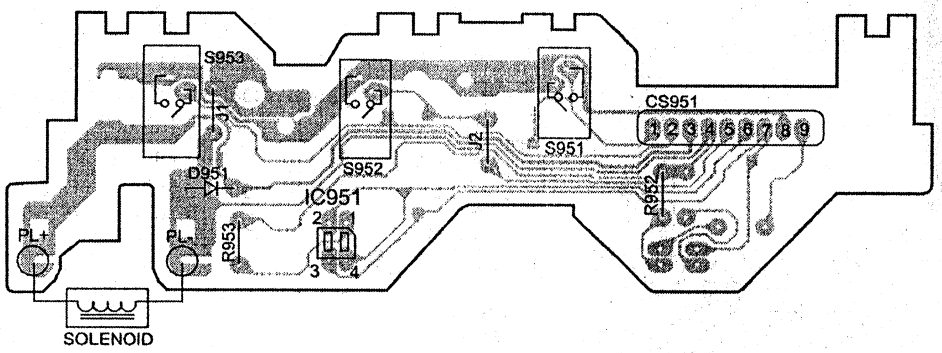
A B C D E F G

1 2 3 4 5 6 7 8 9

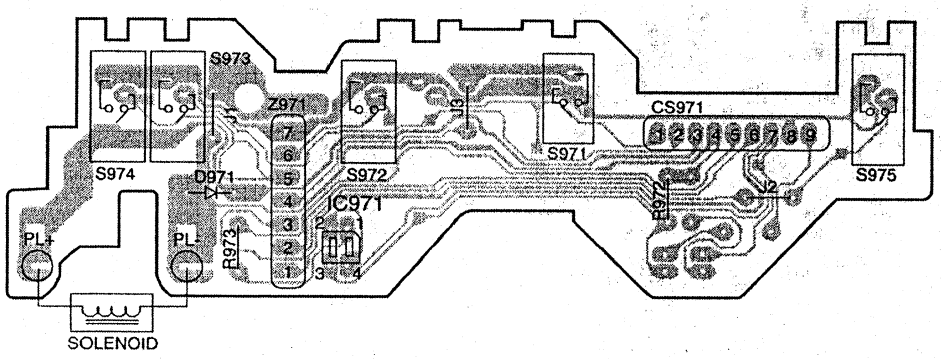
H POWER P.C.B (REP2881D)



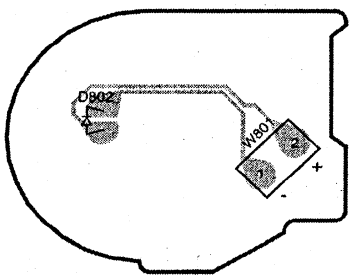
C MECHANISM (DECK2) P.C.B (REPX0108A)



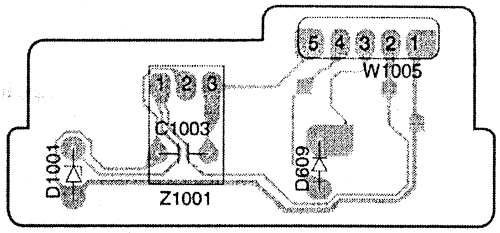
D MECHANISM (DECK1) P.C.B (REPX0108)



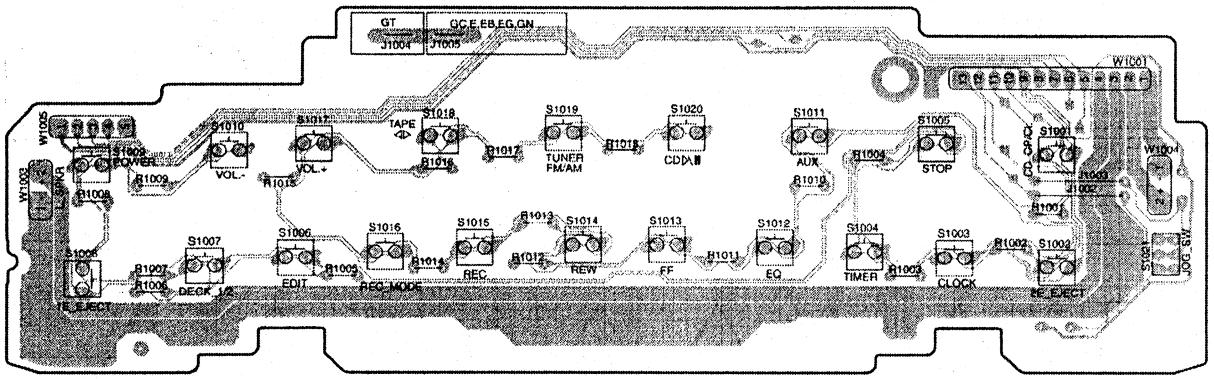
E SWITCH P.C.B (REP2881D)



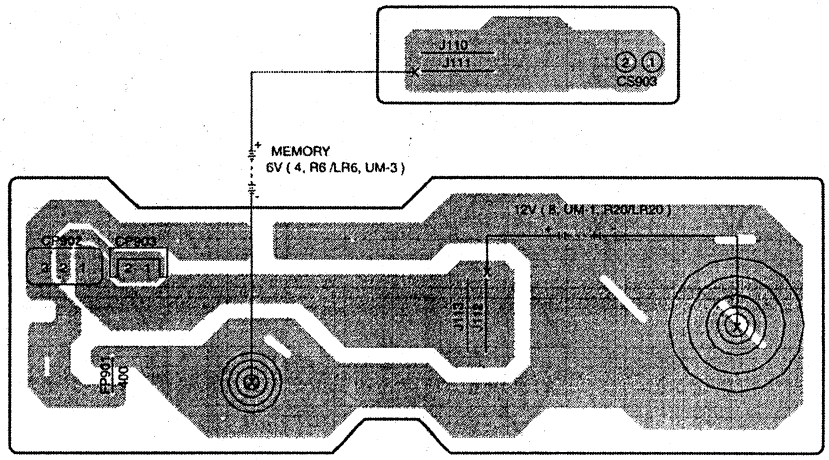
G SENSOR P.C.B (REP2882B)



F PANEL P.C.B (REP2882B)

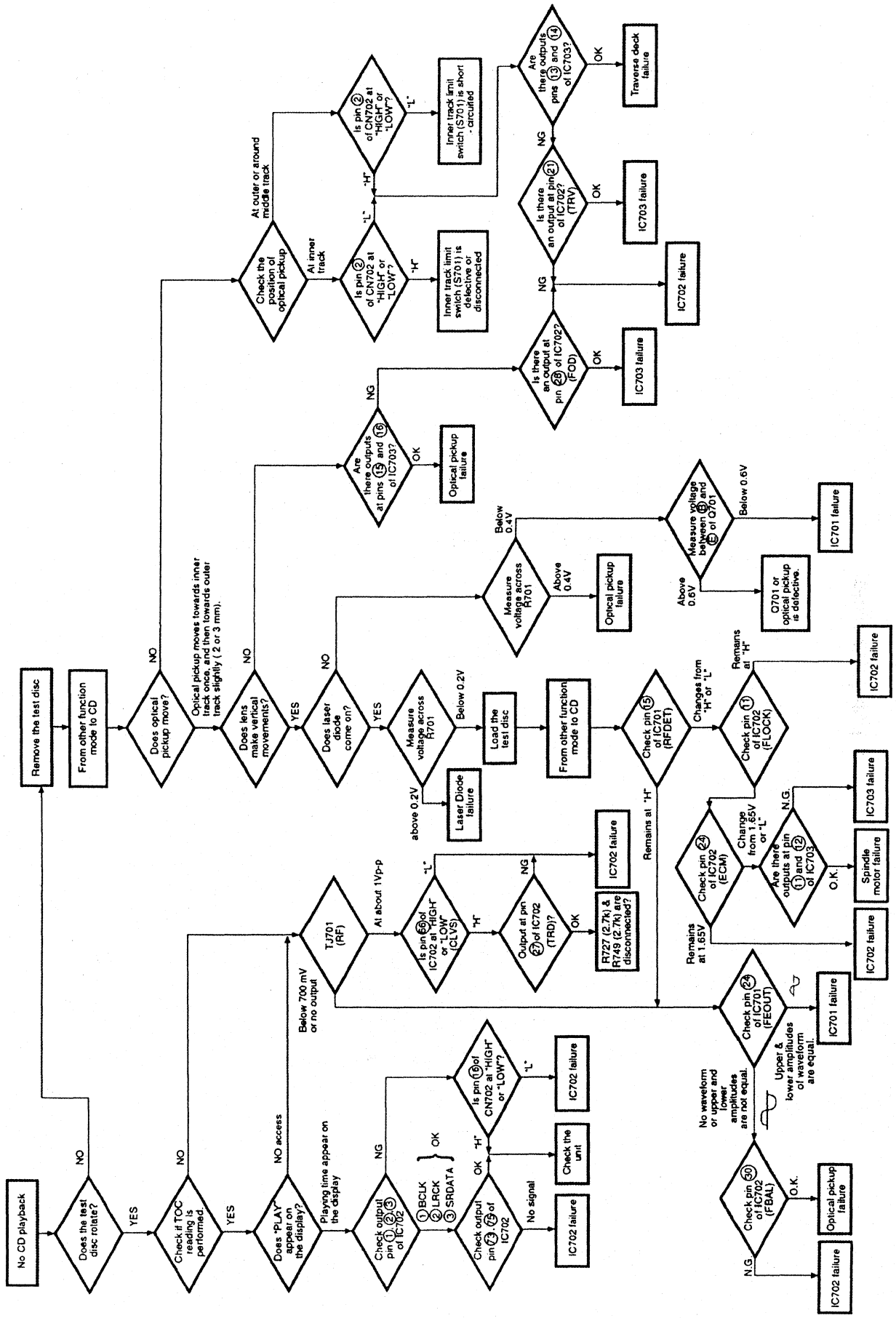


I BATTERY (2) P.C.B (REP2881D)



J BATTERY (1) P.C.B (REP2881D)

17 Troubleshooting Guide



18 Measurements and Adjustments

18.1. Tuner Section

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT
1. Set selector switch to AM or TAPE. 2. Set volume level to 40 3. Output of signal generator should be no higher than necessary to obtain an output reading.

• AM-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	594 kHz	Point of non-interference.(on/ about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	[*1] L6 (AM ANT Coil)	Adjust for maximum output.
"	1503 kHz	"	"	CT1 (AM ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT	REMARKS
QZZCFM (8 kHz, -20 dB)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Shown in Fig. 3)	1. Insert a test tape (QZZCFM) and start playback in the forward direction. 2. Adjust the azimuth screw for maximum waveform on the oscilloscope and the similar output on L and R channels. 3. When adjusting the azimuth in the reverse direction, repeat the adjustment several times because of a little slip on the forward direction side.

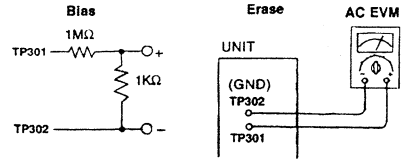
CAUTION:
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- After the adjustment, apply screwlock to the azimuth adjusting screw. (Screw-locking bond: RZZ0L01)

• TAPE SPEED ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz, -10 dB)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Motor VR. (shown in Fig. 4)	3000 ± 90 Hz	1. Insert a test tape (QZZCWAT) in DECK 2 and start playback in the forward direction. 2. Adjust motor VR for output value of 3000 ± 20 Hz shown on frequency counter. 3. Check tht the DECK 2 REV and DECK 1 FWD/ REV tape speed are within DECK 2 FWD tape speed ± 40 Hz.

• BIAS AND ERASE VOLTAGE CHECK

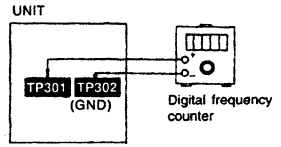
1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to "REC" mode (use " ● REC / STOP" key).
3. Measure and make sure that the output is within the standard value.
4. Insert the CrO_2 tape (QZZCRX).
5. Repeat steps 2 and 3.



Bias voltage for Deck 2 (Standard value)	: 17.3 ± 1mV (Normal) 29 ± 1mV (CrO_2)

• BIAS FREQUENCY ADJUSTMENT (DECK 2)

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to "REC" mode (use "● REC / STOP" key).
3. Adjust L201 so that the output frequency is within the standard value.



Standard Value : 100 ± 7 kHz

18.2. CD Section

Alignment is unneccessary for CD section of this unit.

18.2.1. Alignment Points

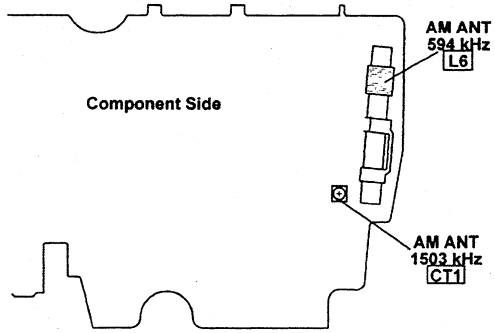


Fig 1

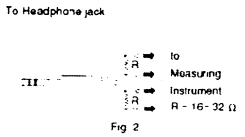


Fig. 2

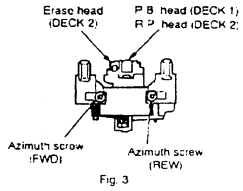


Fig. 3

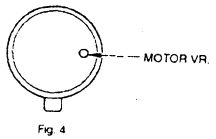
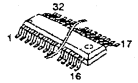
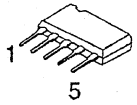
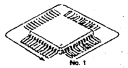
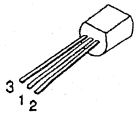
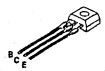
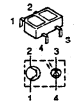
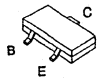
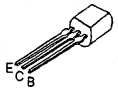
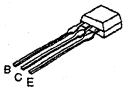
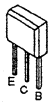
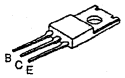
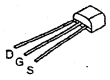
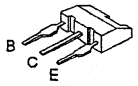
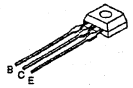
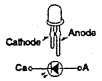
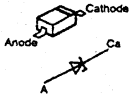
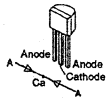
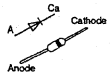
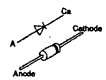
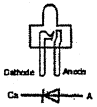
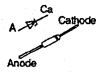
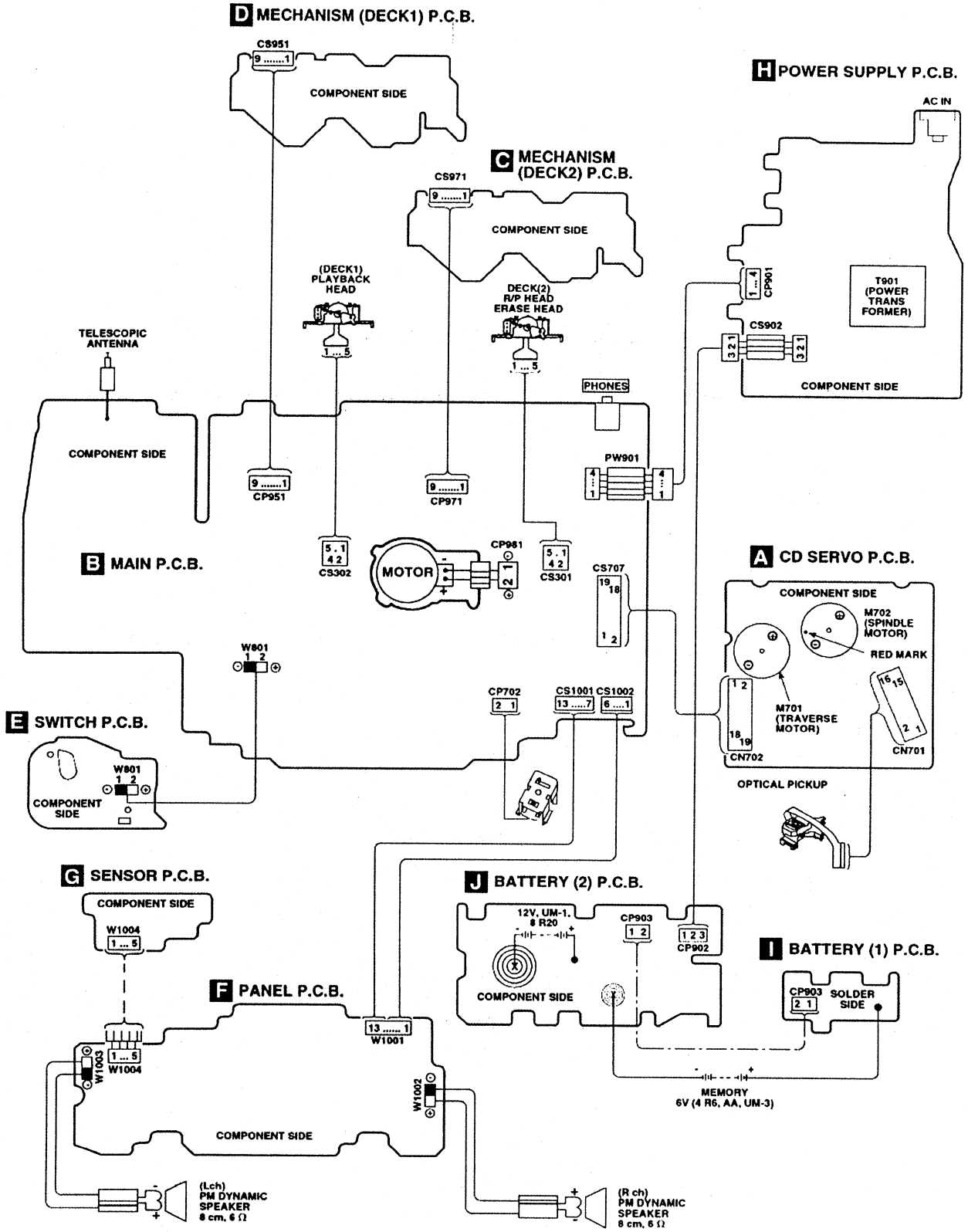


Fig. 4

19 Type Illustrations of IC's, Transistors & Diodes

TA2008AN (24P) LC72131D (22P) BA5948FPE2 (28P) BH3857AFV-E2 (40P) 	BA7755A (5P) 	CXA1998AQ (48P) MN662790RSC (80P) MN101C38CRB3 (100P) 	S81350HG-Z (3P) S-80830ANY-Z (3P) 	AN7194K-LD
AN8837SBE1(28P) 	2SB1030RTA 	ON2180RLC 	2SA1037AKSTX 	2SD965RTA 2SA952LTA 2SA2001KTA 
2SC1740SRTA RVTDTC144TST RVTDTA143XST RVTDTC144EST RVTDTC114YST 2SC1740SRTA 2SC2389SSTA RVTDTC114EST	RVTDTC143EST 	2SD1450RTA 	2SB1566E 	2SJ498CTA 2SJ498DTA 
2SB1240RTV2 	2SA933SSTA 	LNW9A8BYBZ 	MA8056MTX 	SVC346T-AA KV1360NTM 
RVD1SS133TA 1SR35400V MA165TA 	1N5402BM21 	LN221RPH-TA 	MTZJ9R1ATA MTZJ12BTA MTZJ8R2BTA 	

20 Wiring Diagram



21 Terminal Function of IC's

- **IC702 (MN662790RSC) LSI**

Pin No.	Mark	I/O	Function
1	BCLK	O	Bit clock output for serial data
2	LRCK	O	L/R clock signal output
3	SRDATA	O	Serial data output
4	DVDD1	I	Power supply input (for digital circuit)
5	DVSS1	I	Gnd (for digitial circuit)
6	TX	O	Digital audio interface signal output (Latches data at first transition)
7	MCLK	I	Microprocessor command clock signal input
8	MDATA	I	Microprocessor command data signal input
9	MLD	I	Microprocessor command load signal input
10	SENSE	O	Sense signal output (OFT, FESL, MAGEND, NAJEND, POSAD, SFG) (Not used, open)
11	/FLOCK	O	Focus servo feeding signal output ("L": Feed)
12	/TLOCK	O	Tracking servo feeding signal output ("L": Feed)
13	BLKCLK	O	Sub-code block clock signal output
14	SQCK	I	External clock signal input for sub-code Q resistor
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H": Mute)
17	STAT	O	Status signal output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset signal input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL = "H" (fSMCK = 8.4672MHz) 1/4-divided clock signal of crystal oscillating at MSEL = "L" (fSMCK = 4.2336MHz)
20	CSEL	I	Frequency Selection Terminal H = 33.8688MHz; L = 16.9344MHz
21	TRV	O	Traverse forced feed output
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON signal output ("L": ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD,ECS, TRD, FOD, FBAL, TBAL) reference voltage input
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H": detection)
36	OFT	I	Off-track signal input ("H": off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L": detection)
39	BDO	I	Dropout signal input ("H": Dropout)
40	LDON	O	Laser on signal output ("H": ON)
41	PLLF2	I/O	PLL Loop filter Characteristic switching terminal
42	TOFS	O	Tracking Offset alignment output/DSL Balance Output (DA Output)
43	WVEL	O	Double speed status signal output ("H": Double speed)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal
47	DSLF	I/O	DSL loop filter terminal
48	PLLF	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	I	Gnd (for analog circuit)
52	EFM	O	EFM signal output
53	PCK	O	PLL extraction clock output (fPCK = 4.321MHz during normal playback)
54	VCOF2	I/O	VCO Loop filter for 33.8688MHz conversion terminal for 16.9344MHz crystal mode, must use other circuit
55	SUBC	O	Sub-code serial data output
56	SBCK	I	Clock input for sub-code serial data
57	VSS	I	Gnd
58	X1	I	Crystal oscillating circuit input (f = 16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f = 16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	O	Byte clock output
62	/CLDCK	O	Sub-code frame clock signal output (fCLDCK = 7.35kHz during normal playback)
63	FCLK	O	Crystal frame clock signal output (fCLK = 7.35 kHz, double = 14.7 kHz
64	IPFLAG	O	Interpolation flag output ("H": Interpolation)
65	FLAG	O	Flag output
66	CLVS	O	Spindle servo phase synchronizing signal output ("H": CLV, "L": rough servo)
67	CRC	O	Sub-code CRC checked output ("H": OK, "L": NG)
68	DEMPH	O	De-emphasis ON signal output ("H": ON)
69	RESY	O	Frame re-synchronizing signal output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	I	Gnd

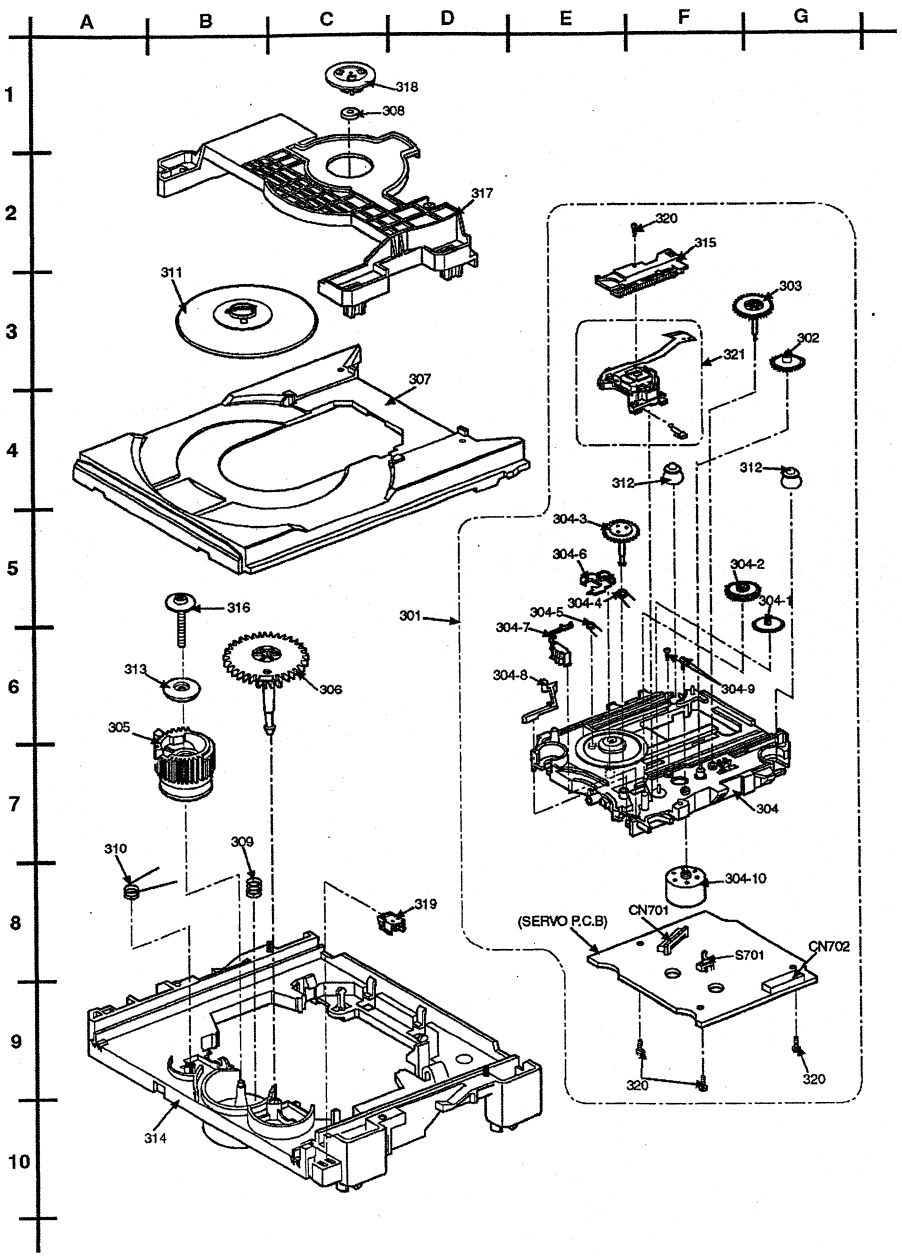
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level: RSEL = "H") (at "L" level: RSEL = "L")
77	VCC5V	I	5V Supply
78	PSEL	I	Test terminal (connected to Gnd)

- **IC801 (MN101C38CRB3) MICROPROCESSOR**

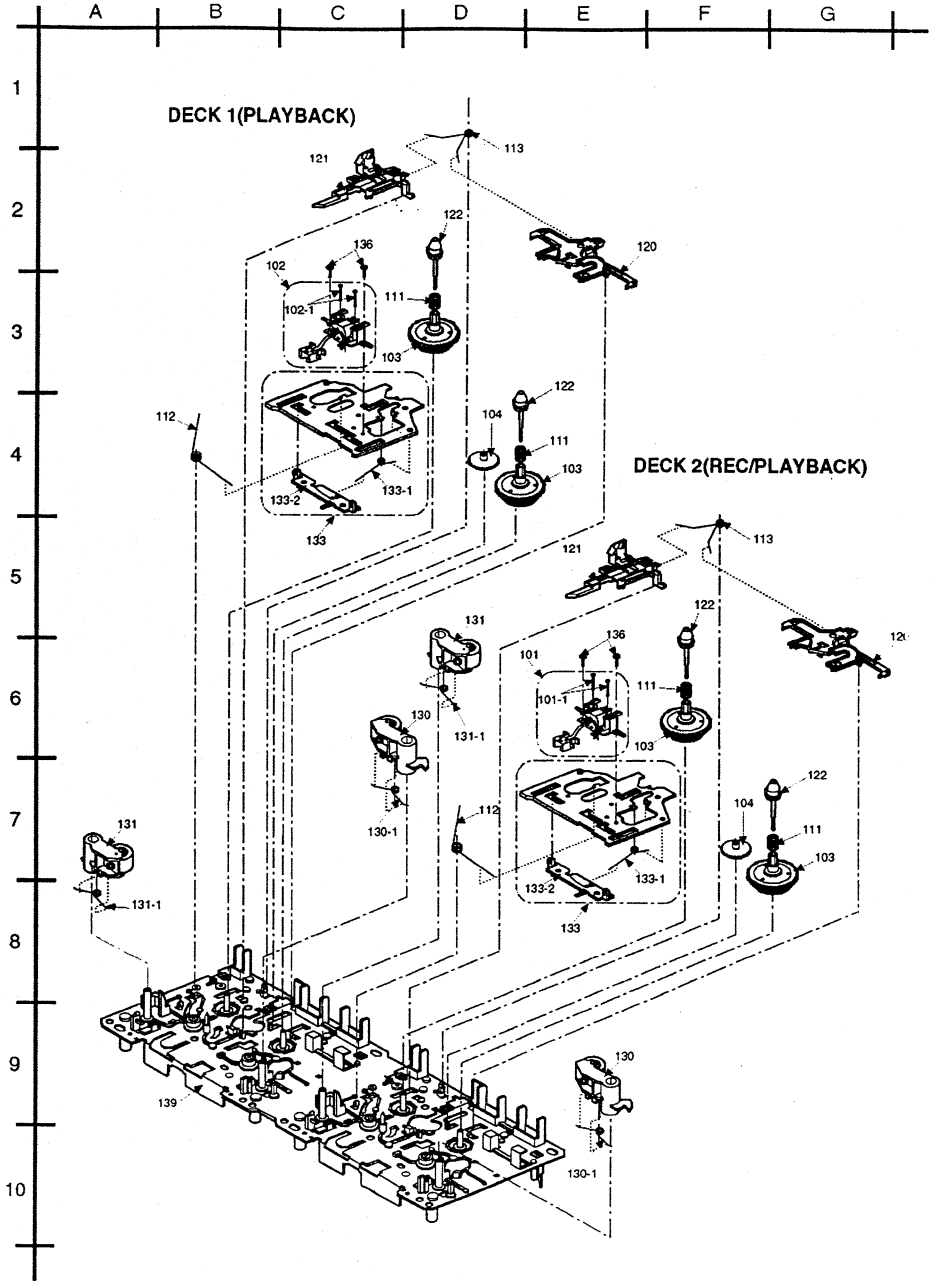
Pin No.	Mark	I/O	Function
1~4	COM3~COM0	O	LCD Common Output
5~7	VLC3~VLC1	-	LCD Bias
8	VDD	-	VDD +5V
9	OSC2	O	8MHz Ceramic OSC Output
10	OSC1	I	8MHz Ceramic OSC Input
11	VSS	-	Gnd
12	XI	I	32.768 kHz OSC Input
13	XO	O	32.768 kHz OSC Output
14	MMOD	I	Microprocessor mode set to "L"
15	VREF-	-	Analog Reference ground
16	JOG1	I	AI Jog Input 1
17	JOG2	I	AI Jog Input 2
18	KEY_1 (ADIN)	A/D	Key Input 1
19	KEY_2 (ADIN)	A/D	Key Input 2
20	PDET_ADIN	A/D	Power supply voltage detect
21~22	PA5~PA6	I	Connect to Gnd
23	MK_ADIN	A/D	Deck Mechanism condition input
24	VREF+	-	+5V Reference for A/D
25	SEL_L	I/(O)	Loading Select Input L = Disable; H = Enable
26	/SUBQ	I	CD Subocde Data Input
27	SQCK	O	CD Subcode Data Clock
28	MBP1	O	Micro-P Beat Proof Control Output 1
29	MBP2	O	Micro-P Beat Proof Control Output 2
30	P05	I	Connect to Gnd
31	PLL_DO	I	Tuner PLL DO Input
32	RESET	I	System Reset Input
33	PLL_DI	O	Tuner PLL DI Output
34	PLL_CLK	O	Tuner PLL CLK Output
35	PLL_CE	O	Tuner PLL CE Output
36	MUTEA	O	"L" = ON
37	A_LATCH	O	ASP IC Latch
38	/BLKC	I	CD Subcode Block Clock Input
39	RMT_IN	I	Remote Control Input
40~42	P22~P24	I	Connect to Gnd
43	PCNT	O	Power Control Output
44	A_CLK	O	ASP IC Clock
45	A_DATA	O	ASP IC Data
46	HALF1	I	TAPE 1 Half SW Input
47	MODE1	I	TAPE 1 Mecha Mode SW
48~49	PHOTO1~2	I	TAPE 1 Photo Detect Input
50	TPS	I	TAPE Mecha TPS Input
51	MK_LATCH	O	TAPE IC Latch Output
52	MK_CLK	O	TAPE IC Clock Output
53	MK_DATA	O	TAPE IC Data Output
54	P63	I	Connect to Gnd
55	MCLK	O	CD Signal Processor Control Clock Output
56	MDATA	O	CD Signal Processor Control Data Output
57	MLD	O	CD Signal Processor Control Load Output
58	/STAT	I	CD Status Input
59	CD RESET	L	CD Reset Output
60	REST SW	I	CD Limit SW Input
61	CD OPEN_H	O	CD Loading open control
62	CD CLOSE_L	O	CD Loading close control
79	MSEL	I	SMCK oscillating frequency designation input ("L": 4.2336MHz, "H": 8.4672MHz)
80	SSEL	I	SUBQ output mode select ("H": Q-code buffer mode)

63	CD OPEN_SW	I	CD Loading open SW
64	RSTBY	I	Remote Control Standby Input
65	VCCDET	I	VCC Detect
66	CD LCLOSE_H	O	CD Loading Close Control SEL_L = L/H
67	CD LOPEN_H	O	CD Loading Open Control SEL_L = L/H
68	EDATA	I/O	EEPROM Data
69	ECLK	O	EEPROM Clock
70	ECS	O	EEPROM Chip Select
71~73	REG1~REG3	I/O	Region setting 3 ~ 1
74~100	SEG26~0	O	LCD Segment Drive Output

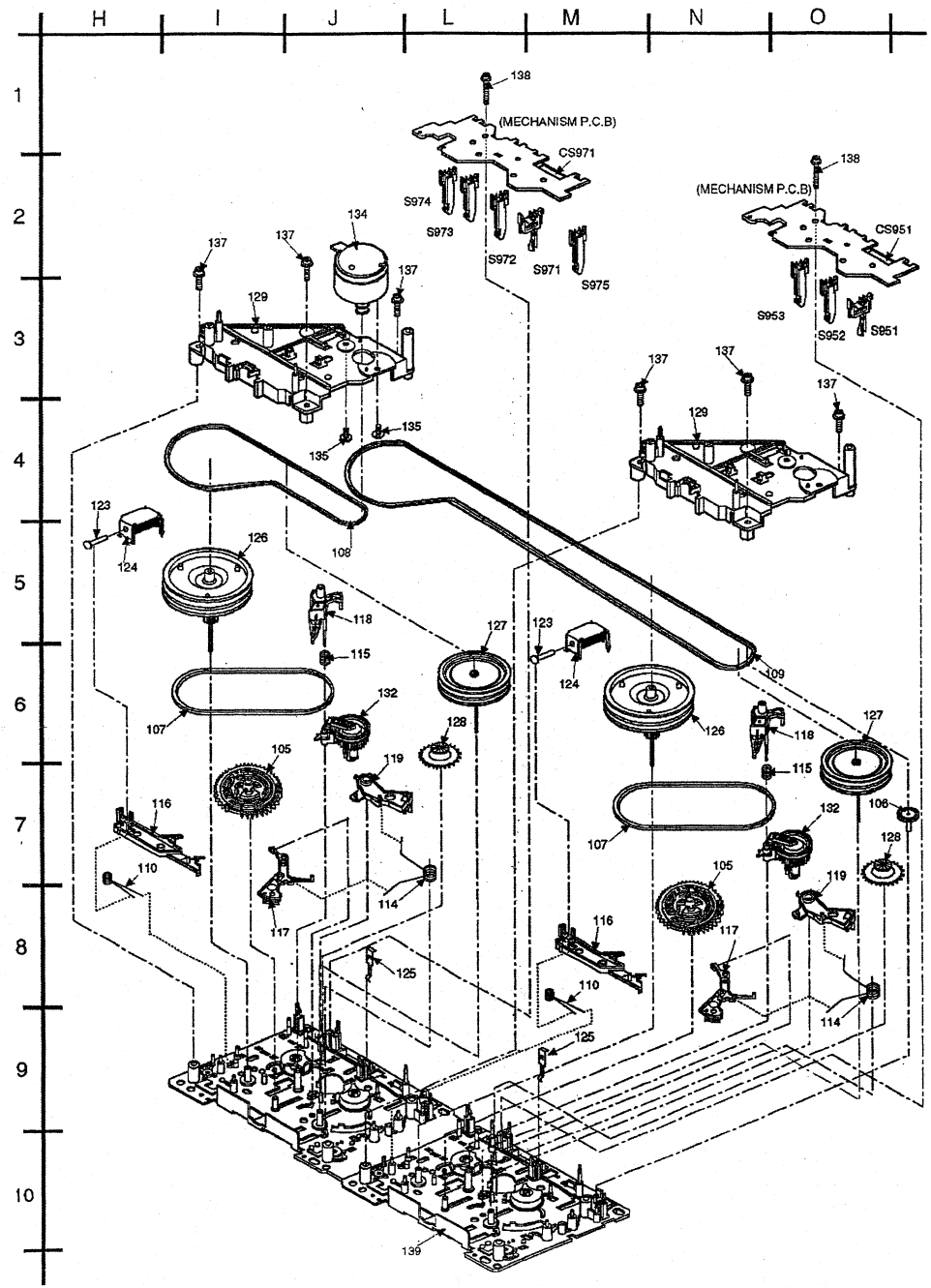
22 Loading Unit Parts Location



23 Mechanism Parts Location (RAA3409)

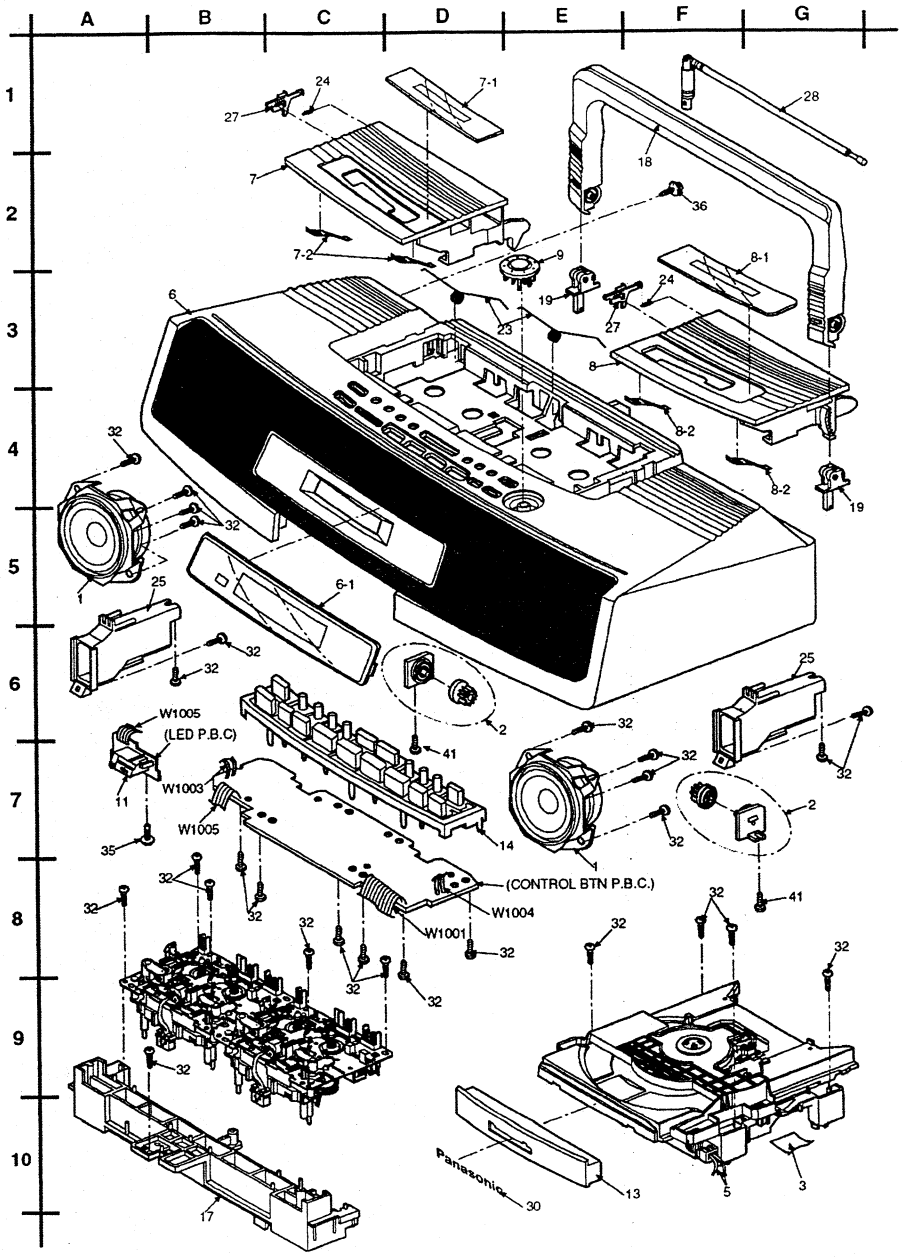


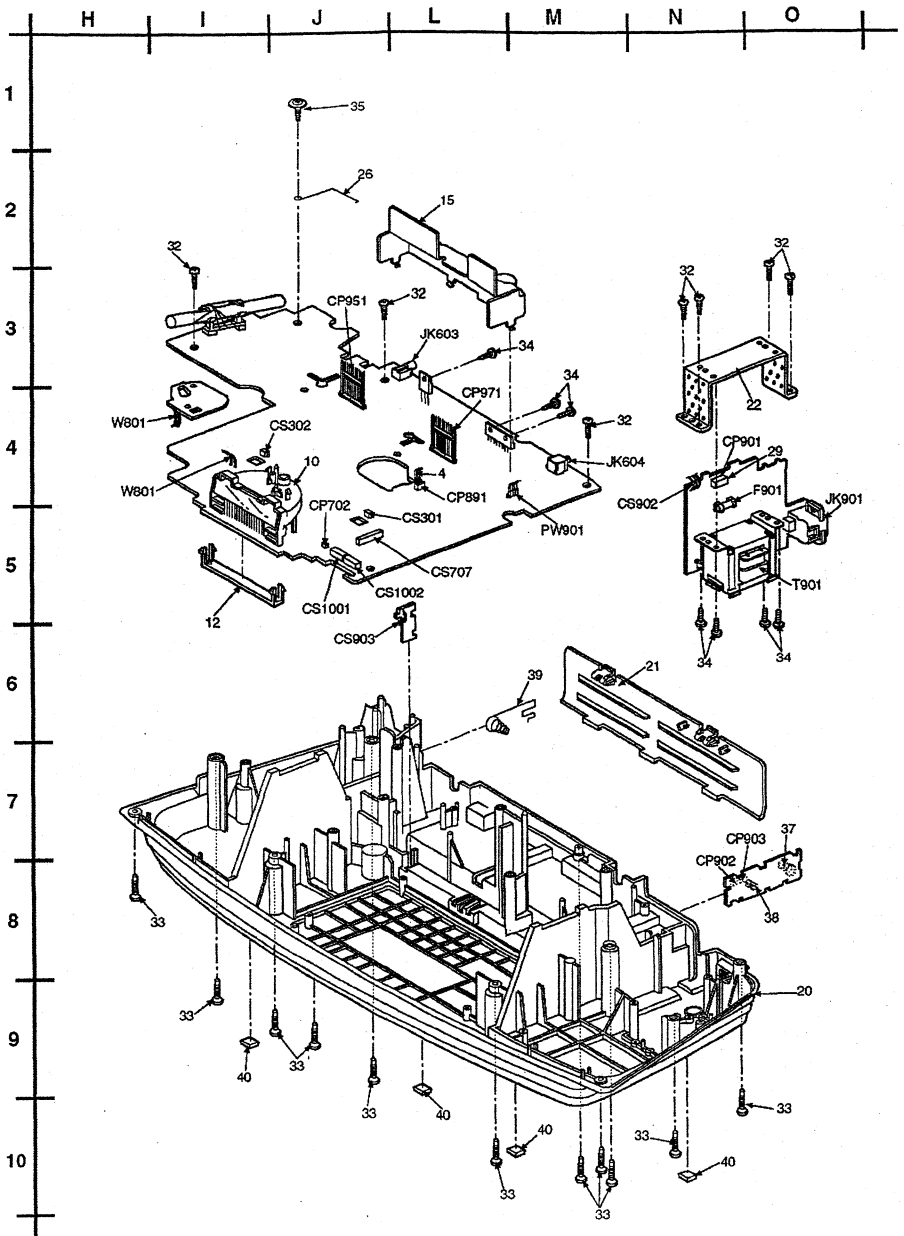
RX-ED50



ED50

24 Cabinet Parts Location





25 Mechanism Parts List

Note: **[M]** mark in Remarks column indicates parts that are supplied by **MESA**.

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0155Z	CT100 TRV	[M]
302	RDG0455	TRV GEAR (A)	[M]
303	RDG0456	TRV GEAR (B)	[M]
304	RFKNCT100	TRAVERSE BASE ASS'Y	[M]
304-1	RDG0457	LOAD GEAR (A)	[M]
304-2	RDG0458	LOAD GEAR (B)	[M]
304-3	RDG0459	LOAD GEAR (C)	[M]
304-4	RME0290	PRESS SPRING	[M]
304-5	RME0291	LOCK SPRING	[M]
304-6	RML0551	TRG LEVER	[M]
304-7	RML0552	LOCK LEVER	[M]
304-8	RMM0219	STOPPER	[M]
304-9	XQN17+C28F	MOTOR SCREW	[M]
304-10	RXQ0632	TRV MOTOR UNIT	[M]
305	RDG0460	CAM GEAR	[M]
306	RDG0461	DRIVE GEAR	[M]
307	RGQ0254-K	TRAY	[M]
308	RHM0001	MAGNET	[M]
309	RMB0603	FLOATING SPRING	[M]
310	RME0288	CENTERING SPRING	[M]
311	RFKNXED50-S	CLAMPER HOLDER ASS'Y	[M]
312	RMG0510-K	FLOATING RUBBER (A)	[M]
313	RMG0511-K	FLOATING RUBBER (B)	[M]
314	RMK0422	MECHA CHASSIS	[M]
315	RMM0218	TRV DRIVE RACK	[M]
316	RHD30083	SCREW (CAM GEAR)	[M]
317	RMR1223-K	CLAMP PLATE	[M]
318	RMR1242-K	FIXED PLATE	[M]
319	RSH1A049-U	OPEN SWITCH	[M]
320	XTN2+6G	SCREW	[M]
321	RXQ0633	OPU UNIT	[M]

26 Loading Mechanism Parts List

Note: **[M]** mark in Remarks column indicates parts that are supplied by **MESA**.

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0059	R/P HEAD BLOCK UNIT	[M]
101-1	RHE5152ZB	SCREW	[M]
102	RED0060	P/B HEAD BLOCK UNIT	[M]
102-1	RHE5152ZB	SCREW	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
106	RDR0029	RELAY PULLEY	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	[M]
109	RDV0057	MAIN BELT B	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-J	SUB CHASSIS	[M]
130	RXL0124	PINCH ROLLER 'F' ASS	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ROLLER 'R' ASS	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0070	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJXED70-K	CHASSIS ASS'Y	[M]

27 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturers's specified parts shown in the parts list.

- The parenthesized indications in the Remarks column specify the areas and/or colour. (Refer to the cover page for area and colour.)

  Parts without these indications can be used for all areas.

- [M] indicates parts that are supplied by **MESA**.

- Warning: This product uses a laser diode. Refer to 3IPrecaution of Laser Diodel of P.3

  ACHTUNG: Die Lasereinheit nicht zerlegen.

  Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RAS8P18-B	SPEAKER	[M]
2	RXG0049	DAMPER GEAR	[M]
3	RXE0925	FFC WIRE	[M]
4	REX0979-1	MOTOR WIRE	[M]
5	REX0980	MAIN TO CD	[M]
6	RFKKXED50EBS	UPPER CAB ASS'Y	[M]EB
6	RFKKXED50EGS	UPPER CAB ASS'Y	[M]EG
6	RFKKXED50E-S	UPPER CAB ASS'Y	[M]E
6-1	RGP0747B-S	LCD PANEL	[M]
7	RFKLXED50-AS	CASS HOLDER ASS'Y(L)	[M]
7-1	RGP0748-Q	CASS PANEL L	[M]
7-2	RUS757ZAA	CASS HALF SPRING	[M]
8	RFKLXED50-BS	CASS HOLDER ASS'Y(R)	[M]
8-1	RGP0749-Q	CASS PANEL R	[M]
8-2	RUS757ZAA	CASS HALF SPRING	[M]
9	RGW0326-S	JOG KNOB	[M]
10	RMN0546	LCD HOLDER	[M]
11	RMN0547	LED HOLDER	[M]
12	RMN0548	PCB FIXTURE	[M]
13	RGK1183-S	CD TRAY LID	[M]
14	RGU1785A-S	CONT BUTTON	[M]
15	RMY0243	HEAT SINK	[M]
17	RMK0429	MECHAS SUPPORT	[M]
18	RKH0046-S	HANDLE	[M]
19	RKQ0224-K	HANDLE FIXTURE	[M]
20	RKS0315C-K	BOTTOM CAB.	[M]
21	RKK0073-3K	BATTERY COVER	[M]
22	RMA1266	TRANS BRACKET	[M]
23	RME0300-2	CASS. OPEN SPRING	[M]
24	RMB0448-J	LOCK ROD SPRING	[M]
25	RKT0065-W	JOINT PORT	[M]
26	RME0301	R ANT TERMINAL	[M]
27	RMM0163	CASSETTE LOCK ROD	[M]
28	XEARR175EA-Y	ROD ANTENNA	[M]
29	RJS1A5504	CABLE HOLDER	[M]
30	RGB301WA-0	PANASONIC BADGE	[M]
32	XTV3+10G	SCREW	[M]
33	XTV3+20G	CASING SCREW	[M]
34	XTV3+8F	SCREW	[M]
35	XTWS3+10Q	SCREW	[M]
36	XYN3+F12FY	ROD ANT SCREW	[M]
37	RJC511XA	BATTERY TERMINAL	[M]
38	RJC70029	UM3 BATT TERMINAL	[M]
39	RJC91008	+-BATTERY TERMINAL	[M]
40	RKA0059-K	LEG FELT	[M]
41	XTBS26+10J	SCREW	[M]
		INTEGRATED CIRCUITS	
IC1	TA2008AN	IC, TUNER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC2	LC72131D	IC, PLL	[M]
IC301	BA7755A	IC, ANALOG SW	[M]
IC302	CXA1998AQ	IC, R/P	[M]
IC602	BH3857AFV-E2	IC, SOUND PROCESSOR	[M]
IC603	S81350HG-Z	IC, 5V REGULATOR	[M] ⚠
IC605	AN7194K-LD	IC, BTC POWER	[M]
IC701	AN8837SBE1	IC, HEAD AMP	[M]
IC702	MN662790RSC	IC, LSI	[M]
IC703	BA5948FPE2	IC, 4 CH DRIVE	[M]
IC801	MN101C38CRB3	IC, MICON	[M]
IC802	S-80830ANY-Z	IC, RESET	[M]
IC951	ON2180RLC1	IC, PHOTO INTERUPTOR	[M]
IC971	ON2180RLC1	IC, PHOTO INTERUPTOR	[M]
		TRANSISTORS	
Q1	RVTDTC114EST	TRANSISTOR	[M]
Q101	2SJ498CTA	TRANSISTOR	[M]
Q103	2SJ498DTA	TRANSISTOR	[M]
Q201	2SJ498CTA	TRANSISTOR	[M]
Q203	2SJ498DTA	TRANSISTOR	[M]
Q302	2SC2389SSTA	TRANSISTOR	[M]
Q303	2SD1450RSTA	TRANSISTOR	[M]
Q304	RVTDTC144TST	TRANSISTOR	[M]
Q305	2SC1740SRTA	TRANSISTOR	[M]
Q306	2SC1740SRTA	TRANSISTOR	[M]
Q307	2SC1740SRTA	TRANSISTOR	[M]
Q308	2SC1740SRTA	TRANSISTOR	[M]
Q309	2SC1740SRTA	TRANSISTOR	[M]
Q310	2SC1740SRTA	TRANSISTOR	[M]
Q311	2SC1740SRTA	TRANSISTOR	[M]
Q312	2SD965RTA	TRANSISTOR	[M]
Q313	RVTDTA143XST	TRANSISTOR	[M]
Q317	RVTDTA143XST	TRANSISTOR	[M]
Q322	2SC1740SRTA	TRANSISTOR	[M]
Q401	2SD1450RSTA	TRANSISTOR	[M]
Q405	2SJ498CTA	TRANSISTOR	[M]
Q501	2SD1450RSTA	TRANSISTOR	[M]
Q505	2SJ498CTA	TRANSISTOR	[M]
Q605	2SB1030RTA	TRANSISTOR	[M]
Q606	2SB1030RTA	TRANSISTOR	[M]
Q607	2SB1566E	TRANSISTOR	[M] ⚠
Q608	2SA933SSTA	TRANSISTOR	[M] ⚠
Q609	2SC1740SRTA	TRANSISTOR	[M] ⚠
Q610	2SA952LTA	TRANSISTOR	[M]
Q611	RVTDTC144EST	TRANSISTOR	[M]
Q612	RVTDTA143XST	TRANSISTOR	[M]
Q613	2SC2001KTA	TRANSISTOR	[M] ⚠
Q614	2SA933SSTA	TRANSISTOR	[M]
Q615	RVTDTC114YST	TRANSISTOR	[M]
Q616	2SA933SSTA	TRANSISTOR	[M]
Q618	2SC1740SRTA	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q619	2SC1740SRTA	TRANSISTOR	[M]
Q620	RVTDTC144EST	TRANSISTOR	[M]
Q621	2SB1240RTV2	TRANSISTOR	[M]
Q622	2SA952LTA	TRANSISTOR	[M]
Q624	2SC1740SRTA	TRANSISTOR	[M]
Q636	2SA952LTA	TRANSISTOR	[M]
Q637	RVTDTC144EST	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q801	2SC1740SRTA	TRANSISTOR	[M]
Q802	2SC1740SRTA	TRANSISTOR	[M]
Q805	RVTDTC143EST	TRANSISTOR	[M]
Q806	RVTDTC143EST	TRANSISTOR	[M]
Q807	RVTDTC143EST	TRANSISTOR	[M]
		DIODES	
D1	SVC346T-AA	DIODE	[M]
D2	KV1360NTM	DIODE	[M]
D3	KV1360NTM	DIODE	[M]
D301	RVD1SS133TA	DIODE	[M]
D602	MTZJ9R1ATA	DIODE	[M] ⚠
D603	1SR35400V	DIODE	[M]
D604	RVD1SS133TA	DIODE	[M]
D605	RVD1SS133TA	DIODE	[M]
D606	RVD1SS133TA	DIODE	[M]
D608	RVD1SS133TA	DIODE	[M] ⚠
D609	LN221RPH-TA	DIODE	[M]
D610	RVD1SS133TA	DIODE	[M]
D611	RVD1SS133TA	DIODE	[M]
D616	RVD1SS133TA	DIODE	[M]
D617	MTZJ12BTA	DIODE	[M] ⚠
D623	1SR35400V	DIODE	[M]
D750	MA8056MTX	DIODE	[M]
D802	LNW9A8BYBZ	DIODE	[M]
D803	RVD1SS133TA	DIODE	[M]
D804	RVD1SS133TA	DIODE	[M]
D901	1N5402BM21	DIODE	[M] ⚠
D902	1N5402BM21	DIODE	[M] ⚠
D903	1N5402BM21	DIODE	[M] ⚠
D904	1N5402BM21	DIODE	[M] ⚠
D951	MA165TA	DIODE	[M]
D971	MA165TA	DIODE	[M]
D1001	MTZJ8R2BTA	DIODE	[M]
		SWITCHES	
S701	RSH1A048-A	SW, RESET	[M]
S951	RSH1A018-3U	SW, LEAF	[M]
S952	RSH1A019-2U	SW, LEAF	[M]
S953	RSH1A019-2U	SW, LEAF	[M]
S971	RSH1A018-3U	SW, LEAF	[M]
S972	RSH1A019-2U	SW, LEAF	[M]
S973	RSH1A019-2U	SW, LEAF	[M]
S974	RSH1A019-2U	SW, LEAF	[M]
S975	RSH1A019-2U	SW, LEAF	[M]
S1001	EVQ21405R	SW, CD OPEN/CLOSE	[M]
S1002	EVQ21405R	SW, DECK 2 EJECT	[M]
S1003	EVQ21405R	SW, CLOCK	[M]
S1004	EVQ21405R	SW, TIEMR	[M]
S1005	EVQ21405R	SW, STOP	[M]
S1006	EVQ21405R	SW, EDIT	[M]
S1007	EVQ21405R	SW, DECK 1/2	[M]
S1008	EVQ21405R	SW, DECK 1 EJECT	[M]
S1009	EVQ21405R	SW, POWER	[M]
S1010	EVQ21405R	SW, VOLUME -	[M]
S1011	EVQ21405R	SW, AUX	[M]
S1012	EVQ21405R	SW, EQ	[M]
S1013	EVQ21405R	SW, FF	[M]
S1014	EVQ21405R	SW, REW	[M]
S1015	EVQ21405R	SW, REC	[M]
S1016	EVQ21405R	SW, REC MODE	[M]
S1017	EVQ21405R	SW, VOLUME +	[M]
S1018	EVQ21405R	SW, TAPE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
S1019	EVQ21405R	SW, TUNER FM/AM	[M]
S1020	EVQ21405R	SW, CD PLAY/PAUSE	[M]
S1021	ESE24SV1	SW, JOG	[M]
SW901	RJJ1SE01-1H	SW, AC INLET (JK901)	[M] ⚠
		CONNECTORS	
CN701	RJS2A6016	16P FPC CONNECTOR	[M]
CN702	RJS1A9319	19P FFC CONNECTOR	[M]
CP702	RJP2G18ZA	2P TO LEAF SW	[M]
CP901	RJT029W004-1	4P CONNECTOR	[M]
CP902	RJT029W003-1	3P CONNECTOR	[M]
CP903	RJT029W002-1	5P CONNECTOR	[M]
CP951	RJT071K09A	CONNECTOR	[M]
CP971	RJT071K09A	CONNECTOR	[M]
CP981	RJT029W02V-1	MOTOR CONNECTOR	[M]
CS301	RJS1A6805-J	CONNECTOR	[M]
CS302	RJS1A6805-J	CONNECTOR	[M]
CS707	RJS1A9419	FFC CONNECTOR	[M]
CS902	REX0978	POWER TO BATT CP	[M]
CS903	REX0981	BATT TO BATT	[M]
CS951	RJU071H09M1	CONNECTOR	[M]
CS971	RJU071H09M1	CONNECTOR	[M]
CS1001	RJS1A6607T1	7P TAPING CONNECTOR	[M]
CS1002	RJS1A6606T1	6P TAPING CONNECTOR	[M]
		TRIMMER	
CT1	ECRLA010A53R	TRIMMER CAPACITOR	[M]
		COILS & TRANSFORMERS	
L2	RLQY30S1W	FM COIL	[M]
L3	RLV2C038-0	F.ANT	[M]
L4	RL04Y210-E	FM COIL	[M]
L6	RL02B132-T	AM OSC COIL	[M]
L7	RLQZP101KT-Y	AXIAL COIL	[M]
L8	RLQY30S1W	FM COIL	[M]
L301	RL08B003-M	BIAS OSC COIL	[M]
L401	RLL500050T-Y	RF CHOKE COIL	[M]
L501	RLL500050T-Y	RF CHOKE COIL	[M]
L602	RLL500050T-Y	RF CHOKE COIL	[M]
L691	RLQZP101KT-Y	AXIAL COIL	[M]
L692	RLQZP101KT-Y	AXIAL COIL	[M]
L693	RLQZP101KT-Y	AXIAL COIL	[M]
L901	RLL500050T-Y	RF CHOKE COIL	[M] ⚠
L902	RLL500050T-Y	RF CHOKE COIL	[M] ⚠
T1	RLI2B014-T	AM IFT	[M]
T901	RTP1L1B011-X	TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z971	EXBF7L355SYV	RADA RESISTOR	[M]
Z1001	RCDRPM6937	REMOTE SENSOR	[M]
		CERAMIC FILTERS	
CF1	RLFFETNL02AL	FM CF	[M]
CF3	RLFDFT20AL	FM DISCRIMINATOR	[M]
		OSCILLATORS	
X2	RSXZ456KZ02	CERAMIC OSCILLATOR	[M]
X3	RSXD7M20C01	CRYSTAL 7.2 MHZ	[M]
X701	RSXZ16M9M06	CERAMIC OSCILLATOR	[M]
X801	RSXZ8M00D01T	CERAMIC RESONATOR	[M]
X802	RSXD32K0C01	CRYSTAL	[M]
		FUSES	
F901	XBA2C31TB0L	FUSE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSE HOLDERS	
FH901	RJR0169T	FUSE HOLDER	[M]
FH902	RJR0169T	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP601	RSFMB025KT-L	FUSE PROTECTOR	[M]
FP901	RSFMB40KT-L	FUSE PROTECTOR	[M]
		JACKS	
JK603	RJJ33T01	JK, TV 4-CH	[M]
JK604	RJJ37TK01-2C	JK, HEAD PHONE	[M]
JK901	RJJ1SE01-1H	JK, AC	[M] ⚠
		LCD	
LCD801	RSL5240-L	LCD	[M]
		WIRES	
W801	RWJ830216088	LIGHT-MAIN	[M]
W1001	RWJ8313240SX	CONT MAIN WIRE	[M]
W1003	RWJ8302205SX	SPEAKER WIRE L	[M]
W1004	RWJ8302205SX	SPEAKER WIRE L	[M]
W1005	RWJ830506588	LED CONT WIRE	[M]
FW901	REX0977	MAIN TO POWER	[M]

28 Resistor & Capacitors

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
- [M] in Remarks column indicates parts that are supplied by **MESA**.
- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads(pF); F=Farad(F).
- Resistors values are in ohms, unless specified otherwise, 1K=1,000(ohms); 1M=1,000K(ohms)

Ref. No.	Part No.	Part Name & Description	Remarks
		RESISTORS	
R2	ERDS2TJ103T	10K 1/4W	[M]
R3	ERDS2TJ332T	3.3K 1/4W	[M]
R4	ERDS2TJ472T	4.7K 1/4W	[M]
R5	ERDS2TJ221T	220 1/4W	[M]
R6	ERDS2TJ104T	100K 1/4W	[M]
R8	ERDS2TJ104T	100K 1/4W	[M]
R9	ERDS2TJ104T	100K 1/4W	[M]
R11	ERDS2TJ223T	22K 1/4W	[M]
R12	ERDS2TJ103T	10K 1/4W	[M]
R16	ERDS2TJ104T	100K 1/4W	[M]
R17	ERDS2TJ222T	2.2K 1/4W	[M]
R20	ERDS2TJ223T	22K 1/4W	[M]
R21	ERDS2TJ103T	10K 1/4W	[M]
R22	ERDS2TJ102T	1K 1/4W	[M]
R23	ERDS2TJ223T	22K 1/4W	[M]
R24	ERDS2TJ103T	10K 1/4W	[M]
R25	ERDS2TJ223T	22K 1/4W	[M]
R26	ERDS2TJ103T	10K 1/4W	[M]
R27	ERDS2TJ332T	3.3K 1/4W	[M]
R28	ERDS2TJ223T	22K 1/4W	[M]
R29	ERDS2TJ103T	10K 1/4W	[M]
R30	ERDS2TJ472T	4.7K 1/4W	[M]
R31	ERDS2TJ222T	2.2K 1/4W	[M]
R32	ERDS2TJ331T	330 1/4W	[M]
R101	ERDS2TJ101T	100 1/4W	[M]
R102	ERDS2TJ102T	1K 1/4W	[M]
R103	ERDS2TJ562T	5.6K 1/4W	[M]
R104	ERDS2TJ104T	100K 1/4W	[M]
R105	ERDS2TJ182T	1.8K 1/4W	[M]
R106	ERDS2TJ332T	3.3K 1/4W	[M]
R110	ERDS2TJ822T	8.2K 1/4W	[M]
R201	ERDS2TJ101T	100 1/4W	[M]
R202	ERDS2TJ102T	1K 1/4W	[M]
R203	ERDS2TJ562T	5.6K 1/4W	[M]
R204	ERDS2TJ104T	100K 1/4W	[M]
R205	ERDS2TJ182T	1.8K 1/4W	[M]
R206	ERDS2TJ332T	3.3K 1/4W	[M]
R210	ERDS2TJ822T	8.2K 1/4W	[M]
R301	ERDS2TJ103T	10K 1/4W	[M]
R302	ERDS2TJ152T	1.5K 1/4W	[M]
R303	ERDS2TJ152T	1.5K 1/4W	[M]
R305	ERDS2TJ103T	10K 1/4W	[M]
R306	ERDS2TJ752T	7.5K 1/4W	[M]
R307	ERDS2TJ822T	8.2K 1/4W	[M]
R308	ERD2FCVJ4R7T	4.7 1/4W	[M] ⚠
R309	ERDS2TJ472T	4.7K 1/4W	[M]
R310	ERDS2TJ472T	4.7K 1/4W	[M]
R311	ERDS2TJ472T	4.7K 1/4W	[M]
R312	ERDS2TJ334T	330K 1/4W	[M]
R313	ERDS2TJ123T	12K 1/4W	[M]
R314	ERDS2TJ472T	4.7K 1/4W	[M]
R315	ERDS2TJ102T	1K 1/4W	[M]
R316	ERDS2TJ470T	47 1/4W	[M]
R317	ERDS2TJ220T	22 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R318	ERDS2TJ335T	3.3M 1/4W	[M]
R319	ERDS2TJ104T	100K 1/4W	[M]
R320	ERDS2TJ104T	100K 1/4W	[M]
R321	ERDS2TJ104T	100K 1/4W	[M]
R322	ERDS2TJ104T	100K 1/4W	[M]
R323	ERDS2TJ273T	27K 1/4W	[M]
R324	ERDS2TJ273T	27K 1/4W	[M]
R325	ERDS2TJ471T	470 1/4W	[M]
R326	ERDS2TJ103T	10K 1/4W	[M]
R327	ERDS2TJ472T	4.7K 1/4W	[M]
R328	ERDS2TJ103T	10K 1/4W	[M]
R329	ERDS2TJ681T	680 1/4W	[M]
R330	ERDS2TJ683T	68K 1/4W	[M]
R331	ERDS2TJ104T	100K 1/4W	[M]
R332	ERDS2TJ104T	100K 1/4W	[M]
R333	ERDS2TJ103T	10K 1/4W	[M]
R334	ERDS2TJ223T	22K 1/4W	[M]
R335	ERDS2TJ470T	47 1/4W	[M]
R336	ERDS2TJ683T	68K 1/4W	[M]
R337	ERDS2TJ104T	100K 1/4W	[M]
R338	ERD2FCVJ4R7T	4.7 1/4W	[M] ⚠
R349	ERDS2TJ224T	220K 1/4W	[M]
R350	ERDS2TJ334T	330K 1/4W	[M]
R366	ERDS2TJ183T	18K 1/4W	[M]
R368	ERDS2TJ220T	22 1/4W	[M]
R369	ERDS2TJ334T	330K 1/4W	[M]
R401	ERDS2TJ473T	47K 1/4W	[M]
R402	ERDS2TJ223T	22K 1/4W	[M]
R404	ERDS2TJ472T	4.7K 1/4W	[M]
R405	ERDS2TJ681T	680 1/4W	[M]
R408	ERDS2TJ332T	3.3K 1/4W	[M]
R410	ERDS2TJ222T	2.2K 1/4W	[M]
R415	ERDS2TJ822T	8.2K 1/4W	[M]
R417	ERDS2TJ273T	27K 1/4W	[M]
R421	ERDS2TJ563T	56K 1/4W	[M]
R432	ERDS2TJ332T	3.3K 1/4W	[M]
R433	ERDS2TJ2R2T	2.2 1/4W	[M]
R434	ERDS2TJ2R2T	2.2 1/4W	[M]
R436	ERDS2TJ151T	150 1/4W	[M]
R438	ERDS2TJ103T	10K 1/4W	[M]
R501	ERDS2TJ473T	47K 1/4W	[M]
R502	ERDS2TJ223T	22K 1/4W	[M]
R504	ERDS2TJ472T	4.7K 1/4W	[M]
R505	ERDS2TJ681T	680 1/4W	[M]
R508	ERDS2TJ332T	3.3K 1/4W	[M]
R510	ERDS2TJ222T	2.2K 1/4W	[M]
R515	ERDS2TJ822T	8.2K 1/4W	[M]
R517	ERDS2TJ273T	27K 1/4W	[M]
R521	ERDS2TJ563T	56K 1/4W	[M]
R532	ERDS2TJ332T	3.3K 1/4W	[M]
R533	ERDS2TJ2R2T	2.2 1/4W	[M]
R534	ERDS2TJ2R2T	2.2 1/4W	[M]
R536	ERDS2TJ151T	150 1/4W	[M]
R538	ERDS2TJ103T	10K 1/4W	[M]
R602	ERDS2TJ103T	10K 1/4W	[M]
R607	ERDS2TJ104T	100K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R608	ERDS2TJ273T	27K 1/4W	[M]
R609	ERDS2TJ332T	3.3K 1/4W	[M]
R610	ERDS2TJ273T	27K 1/4W	[M]
R611	ERDS2TJ332T	3.3K 1/4W	[M]
R612	ERDS2TJ1R5T	1.5 1/4W	[M]
R613	ERDS2TJ1R5T	1.5 1/4W	[M]
R614	ERDS2TJ1R5T	1.5 1/4W	[M]
R615	ERDS2TJ221T	220 1/4W	[M]
R617	ERDS2TJ103T	10K 1/4W	[M]
R618	ERDS2TJ471T	470 1/4W	[M]
R619	ERDS2TJ151T	150 1/4W	[M]
R620	ERDS2TJ332T	3.3K 1/4W	[M]
R621	ERDS2TJ471T	470 1/4W	[M]
R622	ERDS2TJ331T	330 1/4W	[M]
R623	ERDS2TJ821T	820 1/4W	[M]
R624	ERDS2TJ331T	330 1/4W	[M]
R625	ERDS2TJ471T	470 1/4W	[M]
R626	ERDS2TJ681T	680 1/4W	[M]
R627	ERDS2TJ474T	470K 1/4W	[M]
R628	ERDS2TJ103T	10K 1/4W	[M]
R629	ERDS2TJ271T	270 1/4W	[M]
R630	ERDS2TJ393T	39K 1/4W	[M]
R631	ERDS2TJ474T	470K 1/4W	[M]
R632	ERDS2TJ681T	680 1/4W	[M]
R633	ERDS2TJ330T	33 1/4W	[M]
R634	ERDS2TJ330T	33 1/4W	[M]
R635	ERDS2TJ102T	1K 1/4W	[M]
R636	ERDS2TJ471T	470 1/4W	[M]
R637	ERDS2TJ102T	1K 1/4W	[M]
R638	ERDS2TJ104T	100K 1/4W	[M]
R639	ERDS2TJ222T	2.2K 1/4W	[M]
R640	ERDS2TJ333T	33K 1/4W	[M]
R641	ERDS2TJ104T	100K 1/4W	[M]
R642	ERDS2TJ222T	2.2K 1/4W	[M]
R643	ERDS2TJ273T	27K 1/4W	[M]
R645	ERDS2TJ472T	4.7K 1/4W	[M]
R646	ERDS2TJ104T	100K 1/4W	[M]
R647	ERDS2TJ472T	4.7K 1/4W	[M]
R654	ERDS2TJ103T	10K 1/4W	[M]
R655	ERDS2TJ103T	10K 1/4W	[M]
R656	ERDS2TJ472T	4.7K 1/4W	[M]
R657	ERDS2TJ223T	22K 1/4W	[M]
R658	ERDS2TJ101T	100 1/4W	[M]
R659	ERDS2TJ471T	470 1/4W	[M]
R660	ERDS2TJ103T	10K 1/4W	[M]
R661	ERDS2TJ472T	4.7K 1/4W	[M]
R662	ERDS2TJ104T	100K 1/4W	[M]
R663	ERDS2TJ334T	330K 1/4W	[M]
R664	ERDS2TJ105T	1M 1/4W	[M]
R665	ERDS2TJ223T	22K 1/4W	[M]
R666	ERDS2TJ105T	1M 1/4W	[M]
R667	ERDS2TJ474T	470K 1/4W	[M]
R668	ERDS2TJ474T	470K 1/4W	[M]
R669	ERDS2TJ102T	1K 1/4W	[M]
R685	ERDS2TJ101T	100 1/4W	[M]
R687	ERDS2TJ123T	12K 1/4W	[M]
R701	ERJ6GEYJ4R7V	4.7 1/10W	[M]
R702	ERJ6GEYJ103V	10K 1/10W	[M]
R704	ERJ6GEYJ102V	1K 1/10W	[M]
R705	ERJ6GEYJ154V	150K 1/10W	[M]
R706	ERJ6GEYJ102V	1K 1/10W	[M]
R707	ERJ6GEYJ274V	270K 1/10W	[M]
R708	ERJ6GEYJ823V	82K 1/10W	[M]
R709	ERJ6GEYJ683V	68K 1/10W	[M]
R711	ERJ6GEYJ823V	82K 1/10W	[M]
R712	ERJ8GEYJ221V	220 1/8W	[M]
R714	ERJ6GEY0R00V	0 1/10W	[M]
R715	ERJ6GEYJ102V	1K 1/10W	[M]
R717	ERJ6GEYJ102V	1K 1/10W	[M]
R718	ERJ6GEYJ102V	1K 1/10W	[M]
R721	ERJ6GEYJ101V	100 1/10W	[M]
R723	ERJ6GEYJ103V	10K 1/10W	[M]
R724	ERJ6GEYJ153V	15K 1/10W	[M]

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Ref. No.	Part No.	Part Name & Description	Remarks
R725	ERJ6GEYJ681V	680 1/10W	[M]
R727	ERJ6GEYJ272V	2.7K 1/10W	[M]
R728	ERJ6GEYJ222V	2.2K 1/10W	[M]
R729	ERJ6GEYJ272V	2.7K 1/10W	[M]
R731	ERJ6GEYJ103V	10K 1/10W	[M]
R732	ERJ6GEYJ102V	1K 1/10W	[M]
R735	ERJ6GEYJ101V	100 1/10W	[M]
R736	ERJ6GEYJ101V	100 1/10W	[M]
R741	ERJ6GEYJ473V	47K 1/10W	[M]
R742	ERJ6GEYJ224V	220K 1/10W	[M]
R744	ERJ6GEYJ124V	120K 1/10W	[M]
R749	ERJ6GEYJ272V	2.7K 1/10W	[M]
R753	ERJ6GEYJ100V	10 1/10W	[M]
R754	ERJ8GEYJ5R6V	5.6 1/8W	[M]
R801	ERDS2TJ332T	3.3K 1/4W	[M]
R802	ERDS2TJ332T	3.3K 1/4W	[M]
R803	ERDS2TJ223T	22K 1/4W	[M]
R804	ERDS2TJ823T	82K 1/4W	[M]
R805	ERDS2TJ124T	120K 1/4W	[M]
R806	ERDS2TJ104T	100K 1/4W	[M]
R807	ERDS2TJ105T	1M 1/4W	[M]
R809	ERDS2TJ334T	330K 1/4W	[M]
R810	ERDS2TJ474T	470K 1/4W	[M]
R811	ERDS2TJ333T	33K 1/4W	[M]
R812	ERDS2TJ472T	4.7K 1/4W	[M]
R813	ERDS2TJ472T	4.7K 1/4W	[M]
R814	ERDS2TJ472T	4.7K 1/4W	[M]
R815	ERDS2TJ103T	10K 1/4W	[M]
R816	ERDS2TJ103T	10K 1/4W	[M]
R817	ERDS2TJ472T	4.7K 1/4W	[M]
R818	ERDS2TJ472T	4.7K 1/4W	[M]
R819	ERDS2TJ104T	100K 1/4W	[M]
R821	ERDS2TJ223T	22K 1/4W	[M]
R822	ERDS2TJ562T	5.6K 1/4W	[M]
R823	ERDS2TJ472T	4.7K 1/4W	[M]
R824	ERDS2TJ472T	4.7K 1/4W	[M]
R825	ERDS2TJ391T	390 1/4W	[M]
R826	ERDS2TJ104T	100K 1/4W	[M]
R827	ERDS2TJ102T	1K 1/4W	[M]
R828	ERDS2TJ472T	4.7K 1/4W	[M]
R829	ERDS2TJ102T	1K 1/4W	[M]
R830	ERDS2TJ222T	2.2K 1/4W	[M]
R831	ERDS2TJ102T	1K 1/4W	[M]
R832	ERDS2TJ103T	10K 1/4W	[M]
R836	ERDS2TJ104T	100K 1/4W	[M]
R837	ERDS2TJ104T	100K 1/4W	[M]
R838	ERDS2TJ104T	100K 1/4W	[M]
R840	ERDS2TJ102T	1K 1/4W	[M]
R841	ERDS2TJ103T	10K 1/4W	[M]
R843	ERDS2TJ472T	4.7K 1/4W	[M]
R844	ERDS2TJ472T	4.7K 1/4W	[M]
R845	ERDS2TJ103T	10K 1/4W	[M]
R846	ERDS2TJ472T	4.7K 1/4W	[M]
R847	ERDS2TJ472T	4.7K 1/4W	[M]
R848	ERDS2TJ472T	4.7K 1/4W	[M]
R849	ERDS2TJ472T	4.7K 1/4W	[M]
R850	ERDS2TJ472T	4.7K 1/4W	[M]
R851	ERDS2TJ472T	4.7K 1/4W	[M]
R852	ERDS2TJ103T	10K 1/4W	[M]
R853	ERDS2TJ103T	10K 1/4W	[M]
R854	ERDS2TJ103T	10K 1/4W	[M]
R855	ERDS2TJ103T	10K 1/4W	[M]
R856	ERDS2TJ103T	10K 1/4W	[M]
R857	ERDS2TJ153T	15K 1/4W	[M]
R858	ERDS2TJ153T	15K 1/4W	[M]
R859	ERDS2TJ103T	10K 1/4W	[M]
R860	ERDS2TJ103T	10K 1/4W	[M]
R861	ERDS2TJ103T	10K 1/4W	[M]
R862	ERDS2TJ472T	4.7K 1/4W	[M]
R863	ERDS2TJ102T	1K 1/4W	[M]
R864	ERDS2TJ102T	1K 1/4W	[M]
R865	ERDS2TJ102T	1K 1/4W	[M]
R866	ERDS2TJ102T	1K 1/4W	[M]

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Ref. No.	Part No.	Part Name & Description	Remarks
R867	ERDS2TJ102T	1K 1/4W	[M]
R868	ERDS2TJ102T	1K 1/4W	[M]
R869	ERDS2TJ102T	1K 1/4W	[M]
R870	ERDS2TJ105T	1M 1/4W	[M]
R872	ERDS2TJ105T	1M 1/4W	[M]
R874	ERDS2TJ105T	1M 1/4W	[M]
R876	ERDS2TJ102T	1K 1/4W	[M]
R877	ERDS2TJ102T	1K 1/4W	[M]
R952	ERDS2TJ821T	820 1/4W	[M]
R953	ERDS2TJ393T	39K 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R1001	ERDS2TJ152T	1.5K 1/4W	[M]
R1002	ERDS2TJ222T	2.2K 1/4W	[M]
R1003	ERDS2TJ272T	2.7K 1/4W	[M]
R1004	ERDS2TJ392T	3.9K 1/4W	[M]
R1005	ERDS2TJ562T	5.6K 1/4W	[M]
R1006	ERDS2TJ822T	8.2K 1/4W	[M]
R1007	ERDS2TJ153T	15K 1/4W	[M]
R1008	ERDS2TJ333T	33K 1/4W	[M]
R1009	ERDS2TJ823T	82K 1/4W	[M]
R1010	ERDS2TJ152T	1.5K 1/4W	[M]
R1011	ERDS2TJ222T	2.2K 1/4W	[M]
R1012	ERDS2TJ272T	2.7K 1/4W	[M]
R1013	ERDS2TJ392T	3.9K 1/4W	[M]
R1014	ERDS2TJ562T	5.6K 1/4W	[M]
R1015	ERDS2TJ822T	8.2K 1/4W	[M]
R1016	ERDS2TJ153T	15K 1/4W	[M]
R1017	ERDS2TJ333T	33K 1/4W	[M]
R1018	ERDS2TJ823T	82K 1/4W	[M]
R1109	ERDS2TJ103T	10K 1/4W	[M]
R1113	ERDS2TJ102T	1K 1/4W	[M]
R1114	ERDS2TJ102T	1K 1/4W	[M]
R1115	ERDS2TJ102T	1K 1/4W	[M]
R1118	ERDS2TJ103T	10K 1/4W	[M]
R1119	ERDS2TJ472T	4.7K 1/4W	[M]
		CAPACITORS	
C1	ECBT1H470J5	47P 50V	[M]
C2	ECBT1H100JC5	10P 50V	[M]
C3	ECFR1C223MR	0.022 16V	[M]
C4	ECBT1H102KB5	1000P 50V	[M]
C5	ECBT1H8R2KC5	8.2P 50V	[M]
C6	ECBT1H102KB5	1000P 50V	[M]
C7	ECBT1H120JC5	12P 50V	[M]
C8	ECBT1H102KB5	1000P 50V	[M]
C9	ECBT1H102KB5	1000P 50V	[M]
C10	ECBT1H4R7KC5	4.7P 50V	[M]
C11	ECQP1391JZT	390P 100V	[M]
C12	ECBT1H331KB5	330P 50V	[M]
C13	ECA1EAK100XB	10 25V	[M]
C14	ECBT1H102KB5	1000P 50V	[M]
C15	ECFR1C683MR	0.068 16V	[M]
C16	ECFR1C823MR	0.082 16V	[M]
C17	ECFR1C823MR	0.082 16V	[M]
C18	ECFR1C223MR	0.022 16V	[M]
C19	ECFR1C223MR	0.022 16V	[M]
C20	ECA1HAK010XB	1 50V	[M]
C21	ECA1HAK010XB	1 50V	[M]
C22	ECA1HAK4R7XB	4.7 50V	[M]
C23	ECFR1C333MR	0.033 16V	[M]
C24	ECFR1C333MR	0.033 16V	[M]
C30	ECBT1H331KB5	330P 50V	[M]
C31	ECBT1C103MS5	0.01 16V	[M]
C32	ECBT1H102KB5	1000P 50V	[M]
C33	ECBT1H102KB5	1000P 50V	[M]
C34	ECBT1H102KB5	1000P 50V	[M]
C35	ECA1CAK101XB	100 16V	[M]
C36	ECA1CAK101XB	100 16V	[M]
C37	ECBT1C103MS5	0.01 16V	[M]
C38	ECBT1H101KB5	100P 50V	[M]
C39	ECBT1H180JC5	18P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C40	ECBT1C222MR5	2200P 16V	[M]
C42	ECBT1H330J5	33P 50V	[M]
C44	ECEA1HKA2R2B	2.2 50V	[M]
C45	ECBT1H102KB5	1000P 50V	[M]
C47	ECFR1C223MR	0.022 16V	[M]
C48	ECA1HAK010XB	1 50V	[M]
C49	ECBT1H102KB5	1000P 50V	[M]
C50	ECBT1H102KB5	1000P 50V	[M]
C51	ECFR1C333MR	0.033 16V	[M]
C53	ECBT1H102KB5	1000P 50V	[M]
C54	ECBT1H102KB5	1000P 50V	[M]
C55	ECA1HAK4R7XB	4.7 50V	[M]
C101	ECBT1H471KB5	470P 50V	[M]
C102	ECBT1H471KB5	470P 50V	[M]
C103	ECEA0JKA470B	47 6.3V	[M]
C104	ECFR1C183KR	0.018 16V	[M]
C105	ECA1HAK4R7XB	4.7 50V	[M]
C106	ECBT1H471KB5	470P 50V	[M]
C107	ECA1HAK010XB	1 50V	[M]
C108	ECA1HAK010XB	1 50V	[M]
C109	ECA1HAK4R7XB	4.7 50V	[M]
C110	ECA1HAK4R7XB	4.7 50V	[M]
C111	ECBT1H331KB5	330P 50V	[M]
C201	ECBT1H471KB5	470P 50V	[M]
C202	ECBT1H471KB5	470P 50V	[M]
C203	ECEA0JKA470B	47 6.3V	[M]
C204	ECFR1C183KR	0.018 16V	[M]
C205	ECA1HAK4R7XB	4.7 50V	[M]
C206	ECBT1H471KB5	470P 50V	[M]
C207	ECA1HAK010XB	1 50V	[M]
C208	ECA1HAK010XB	1 50V	[M]
C209	ECA1HAK4R7XB	4.7 50V	[M]
C210	ECA1HAK4R7XB	4.7 50V	[M]
C211	ECBT1H331KB5	330P 50V	[M]
C301	ECEA1HN2R2SB	2.2 50V	[M]
C303	ECBT1C103MS5	0.01 16V	[M]
C305	ECQP1821JZT	820P 100V	[M]
C306	ECQP1472JZT	4700P 100V	[M]
C307	ECA1HAK010XB	1 50V	[M]
C308	ECA1CAK101XB	100 16V	[M]
C309	ECQV1H473JZ3	0.047 50V	[M]
C310	ECBT1H102KB5	1000P 50V	[M]
C311	ECBT1H102KB5	1000P 50V	[M]
C312	ECBT1C222MR5	2200P 16V	[M]
C313	ECBT1C222MR5	2200P 16V	[M]
C314	ECBT1C332MR5	3300P 16V	[M]
C315	ECEA0JKA470B	47 6.3V	[M]
C317	ECA1EAK100XB	10 25V	[M]
C318	ECFR1C473MR	0.047 16V	[M]
C319	ECA1HAK0R1XB	0.1 50V	[M]
C320	ECEA1AKA470B	47 10V	[M]
C321	ECA1CAK101XB	100 16V	[M]
C322	ECA1EAK100XB	10 25V	[M]
C323	ECEA0JKA470B	47 6.3V	[M]
C324	ECA1HAK0R1XB	0.1 50V	[M]
C325	ECBT1H471KB5	470P 50V	[M]
C326	ECBT1H471KB5	470P 50V	[M]
C327	ECBT1H471KB5	470P 50V	[M]
C329	ECEA1AKA470B	47 10V	[M]
C330	ECEA1AKA221Q	220 10V	[M]
C334	ECA1EAK100XB	10 25V	[M]
C338	ECFR1C223MR	0.022 16V	[M]
C401	ECBT1H221KB5	220P 50V	[M]
C402	ECA1EAK100XB	10 25V	[M]
C403	ECA1CAK330XB	33 16V	[M]
C404	ECA1HAKR33XB	0.33 50V	[M]
C405	ECFR1C153MR	0.015 16V	[M]
C406	ECBT0J223MS5	0.022 6.3V	[M]
C408	ECBT1H101KB5	100P 50V	[M]
C412	ECBT1H221KB5	220P 50V	[M]
C416	ECBT1H470J5	47P 50V	[M]
C419	ECA1HAKR47XB	0.47 50V	[M]
C431	ECBT1H104KB5	0.1 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C432	ECBT1H104KB5	0.1 50V	[M]
C433	ECBT1H471KB5	470P 50V	[M]
C434	ECA1CAK330XB	33 16V	[M]
C436	ECBT1C222MR5	2200P 16V	[M]
C439	ECFR1C103MR	0.01 16V	[M]
C501	ECBT1H221KB5	220P 50V	[M]
C502	ECA1EAK100XB	10 25V	[M]
C503	ECA1CAK330XB	33 16V	[M]
C504	ECA1HAKR33XB	0.33 50V	[M]
C505	ECFR1C153MR	0.015 16V	[M]
C506	ECBT0J223MS5	0.022 6.3V	[M]
C508	ECBT1H101KB5	100P 50V	[M]
C512	ECBT1H221KB5	220P 50V	[M]
C516	ECBT1H470J5	47P 50V	[M]
C519	ECA1HAKR47XB	0.47 50V	[M]
C531	ECBT1H104KB5	0.1 50V	[M]
C532	ECBT1H104KB5	0.1 50V	[M]
C533	ECBT1H471KB5	470P 50V	[M]
C534	ECA1CAK330XB	33 16V	[M]
C536	ECBT1C222MR5	2200P 16V	[M]
C539	ECFR1C103MR	0.01 16V	[M]
C605	ECA1HAKR22XB	0.22 50V	[M]
C606	ECBT1H102KB5	1000P 50V	[M]
C607	ECA1EAK100XB	10 25V	[M]
C610	ECA1CAK101XB	100 16V	[M]
C611	ECBT1H221KB5	220P 50V	[M]
C612	ECA1CAK101XB	100 16V	[M]
C613	ECBT1H471KB5	470P 50V	[M]
C614	ECA1CAK330XB	33 16V	[M]
C616	ECA1EAM332XE	3300 25V	[M] ⚠
C619	ECA1EAK100XB	10 25V	[M]
C620	ECA1EAK100XB	10 25V	[M]
C621	ECA1EAK100XB	10 25V	[M]
C622	ECA1EAK100XB	10 25V	[M]
C623	ECBT1H221KB5	220P 50V	[M]
C624	ECBT1H221KB5	220P 50V	[M]
C625	ECBT1H221KB5	220P 50V	[M]
C627	ECA1CAK101XB	100 16V	[M]
C628	ECA1EAK100XB	10 25V	[M]
C630	ECBT1H221KB5	220P 50V	[M]
C631	ECA1HAK010XB	1 50V	[M]
C632	ECA1CAK330XB	33 16V	[M]
C634	ECA1CAK330XB	33 16V	[M]
C651	ECA1EAK100XB	10 25V	[M]
C656	ECA1HAK010XB	1 50V	[M]
C657	ECA1EAK100XB	10 25V	[M]
C658	ECA1HAK010XB	1 50V	[M]
C659	ECA1EAK100XB	10 25V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C702	ECUV1E104MBN	0.1 25V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C704	ECUV1E104MBN	0.1 25V	[M]
C706	ECUV1H272KBN	2700P 50V	[M]
C707	ECUV1E273KBN	0.027 25V	[M]
C710	ECUV1H121JCN	120P 50V	[M]
C711	ECUV1E104KBN	0.1 25V	[M]
C712	ECUV1E104KBN	0.1 25V	[M]
C713	ECUV1E104MBN	0.1 25V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C715	ECUV1H272KBN	2700P 50V	[M]
C716	ECUV1H821KBN	820P 50V	[M]
C717	ECUV1E104ZFN	0.1 25V	[M]
C718	ECUV1C224KBN	0.22 16V	[M]
C721	ECUV1H100JCN	10P 50V	[M]
C722	ECUV1H100JCN	10P 50V	[M]
C723	ECEA1AKA221I	220 10V	[M]
C724	ECUV1E104MBN	0.1 25V	[M]
C725	ECUV1H102KBN	1000P 50V	[M]
C726	ECUV1H102KBN	1000P 50V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C730	ECUV1E104ZFN	0.1 25V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C732	ECEA0JKA221I	220 6.3V	[M]
C733	ECUV1E104MBN	0.1 25V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	ECUV1E104ZFN	0.1 25V	[M]
C736	ECUV1E104ZFN	0.1 25V	[M]
C737	ECUV1E104ZFN	0.1 25V	[M]
C738	ECUV1H563KBN	0.056 50V	[M]
C739	ECUV1H222KBN	2200P 50V	[M]
C742	ECUV1E273KBN	0.027 25V	[M]
C743	ECUV1E104ZFN	0.1 25V	[M]
C744	ECUV1E822KBN	8200P 25V	[M]
C745	ECUV1E104ZFN	0.1 25V	[M]
C747	ECUV1H181JCN	180P 50V	[M]
C749	ECUV1H222KBN	2200P 50V	[M]
C750	ECUV1E104MBN	0.1 25V	[M]
C751	ECUV1E104MBN	0.1 25V	[M]
C752	ECUV1H152KBN	1500P 50V	[M]
C753	ECUV1H471KBN	470P 50V	[M]
C754	ECUV1H471KBN	470P 50V	[M]
C801	ECBT1H102KB5	1000P 50V	[M]
C802	ECBT1H102KB5	1000P 50V	[M]
C803	ECBT1H102KB5	1000P 50V	[M]
C804	ECA1CAK101XB	100 16V	[M]
C805	ECBT1H102KB5	1000P 50V	[M]
C806	ECBT1C103MS5	0.01 16V	[M]
C807	ECBT1H220JC5	22P 50V	[M]
C808	ECBT1H101KB5	100P 50V	[M]
C809	ECBT1H100JC5	10P 50V	[M]
C810	ECBT1H101KB5	100P 50V	[M]
C812	ECBT1C103MS5	0.01 16V	[M]
C813	ECBT1H220JC5	22P 50V	[M]
C814	ECBT1H220JC5	22P 50V	[M]
C815	ECBT1H102KB5	1000P 50V	[M]
C816	ECBT1H102KB5	1000P 50V	[M]
C817	ECBT1H102KB5	1000P 50V	[M]
C818	ECBT1H102KB5	1000P 50V	[M]
C819	ECBT1H102KB5	1000P 50V	[M]
C820	ECBT1H102KB5	1000P 50V	[M]
C901	ECKR1H103ZF5	0.01 50V	[M]
C902	ECKR1H103ZF5	0.01 50V	[M]
C903	ECKR1H103ZF5	0.01 50V	[M]
C904	ECKR1H103ZF5	0.01 50V	[M]
C1002	ECBT1H101KB5	100P 50V	[M]
C1003	ECBT1C103MS5	0.01 16V	[M]
		CHIP JUMPER	
RJ701	ERJ6GEY0R00V	0 1/10W	[M]
RJ702	ERJ8GEY0R00V	0 1/8W	[M]
RJ703	ERJ8GEY0R00V	0 1/8W	[M]
RJ709	ERJ8GEY0R00V	0 1/8W	[M]
RJ712	ERJ8GEY0R00V	0 1/8W	[M]
RJ722	ERJ6GEY0R00V	0 1/10W	[M]
RJ723	ERJ6GEY0R00V	0 1/10W	[M]
RJ724	ERJ6GEY0R00V	0 1/10W	[M]
RJ726	ERJ6GEY0R00V	0 1/10W	[M]
RJ727	ERJ6GEY0R00V	0 1/10W	[M]
RJ728	ERJ6GEY0R00V	0 1/10W	[M]
RJ731	ERJ6GEY0R00V	0 1/10W	[M]
RJ732	ERJ6GEY0R00V	0 1/10W	[M]
RJ734	ERJ6GEY0R00V	0 1/10W	[M]
		TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER	[M]

29 Packing Materials & Accessories

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturers's specified parts shown in the parts list.
- The parenthesized indications in the Remarks column specify the areas and/or colour. (Refer to the cover page for area and colour.)

  Parts without these indications can be used for all areas.
- The "(SF)" mark denotes the standard part.
- [M] in the Remarks columns indicates parts are supplied by **MESA**.
- Remote Control Unit: Supply period for three years from terminal of production.

Ar	: Arabic	Cf	: Canadian French	Co	: Chinese (old)	Cz	: Czech
Cn	: Chinese (new)	Du	: Dutch	En	: English	Fr	: French
It	: Italian	Ko	: Korean	Po	: Polish	Ru	: Russian
Sw	: Swedish	Da	: Danish	Ge	: German	Sp	: Spanish

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG4551	PACKING CASE	[M]E
P1	RPG4552	PACKING CASE	[M]EB EG
P2	RPN1219	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT SHEET	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	EUR644864	REMOTE CONTROL	[M]
A1-1	UR64EC1822R	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF)	[M]EG E
A2	VJA0733	AC CORD (SF)	[M]EB
A3	RQT5138-D	O/I BOOK (Ge/It/Fr)	[M]EG
A3	RQT5139-H	O/I BOOK (Du/Da)	[M]EG
A3	RQT5140-E	O/I BOOk (En/Sp/Sw)	[M]E
A3	RQT5141-R	O/I BOOK (Ru/Cz/Po)	[M]E
A3	RQT5142-B	O/I BOOk (En)	[M]EB

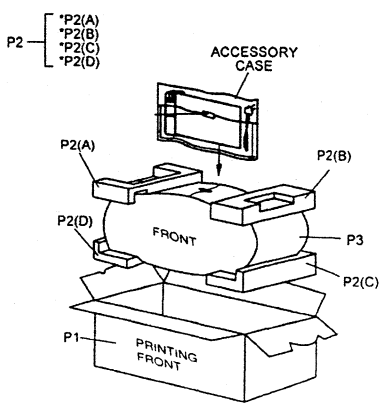
30 Packaging

- **Accessory Case**

  A1: Remote Control

  A2: AC Cord

  A3: O/I Book



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